REPORTS ON THE TOWNS

IN THE

MADRAS PRESIDENCY.

VISITED BY

PROFESSOR GEDDES.

1914-1915.

செப்பனிடுவதற்காக எடுத்துக்
கொள்ளப்பட்ட

மாதம் 1990 வருடம்

செப்பனிட்டு முடித்த

மாதம் 1990 வருடம்

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REPORTS ON THE TOWNS IN THE MADRAS PRESIDENCY VISITED BY PROFESSOR GEDDES.

COCANADA.*

Before meeting the Chairman and officers of the Municipality for the discussion of their problems, we arranged to have a quiet morning for an independent and preliminary survey of the town. Yet this not simply by motoring, slowly and observantly of course, to and fro through the town's network; though that also is an instructive way of beginning, empiric though it be. For here two or three questions especially suggested themselves from the first, requiring two essential points of view; of Port and of Country. For this is a centre of export; that is, a point where maritime and agricultural populations and activities meet and co-operate; and this, as in most such mercantile communities, essentially under the domination of the former. Here then is the explanation of the value and attractiveness of this situation to the Dutch (with whose home and colonial viewpoint this town came clearly into line) and their long-enduring hold upon it—until 1825—is thus intelligible. On account of that absence of a true port which Cocanada shares with nearly all other Madras towns, the fishermen become lightermen, and thus tend to attain normally to a condition of increased responsibility, importance and well-being; how far is this reflected and expressed in their housing? and if little, why?

To these questions (at the time not so clearly formulated) we reached no sufficiently clear replies. The next question, what of the Dutch with their housing and town-planning?—is more easily answered by the inspection of the inner port (if we may so style the canal quays) and of the old town of Jagannathapuram, with its formal and spacious lay-out, its few dignified old bungalows. Here again an antiquarian enquiry would be needed if leisure allowed—ranging from old house-interiors, scraps of old furniture in bazaar or in homes, and again to old business offices and their traditions,—if not here, then partly in the old East India archives, and above all between official records and family traditions, as partly among any residents of Dutch name or descent, and perhaps also in Holland. Enough here if we see that a whole book on these lines may some day be written; and this not only of local interest, as might at first seem; or even as raising the problems of Madras history as affected by the rivalry of European powers. Beyond these academic viewpoints of history, general and local, each considered as a record of the dead, comes vital questioning of history—that of elucidating the factors which explain the present situation and condition of the living. As the old Dutch influence has survived even in New York (and this in many ways, even from social leadership like that of old families, to national leadership, like Theodore Roosevelt's) may we not expect to find something of it here, in a quiet and comparatively little altered town, especially since the Dutch Company only relinquished its authority in the time of our grandfathers? What then were its qualities and its defects? And how far have each of these interacted or combined with those of others—first of Indian fisherman and peasant, and then with our own, as their successors? and, ours again with the fisher-folk and peasants aforesaid? Our historic enquiries into records of fact have thus passed into new enquiries, even into the social psychology of the town in the present. Hence besides a history of Cocanada (and why not its historical romance?—indeed many of them) we now begin to see some of the lines on which may also, any day, arise its corresponding novel. What is meant may be illustrated from the tales of Galt for Scotland, of George Cable for Louisiana, and of others for the "literature of locality" everywhere.

But for even the formulation of such questions we cannot wait. For we have still to see the agricultural village, the nearest that may be, yet sufficiently outside the town and distant from it to escape urban modification; it thus shows us the simple and original social texture, which no town can ever spin or weave, but which it so easily and commonly wears down, and this to rags.

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* For plans please see after page 16.

Here then we are getting back towards nature and social origins, amid a veritable wealth of survivals of simple life and early civilization. It is our first opportunity of seeing closely and entering the round huts which are so characteristic of Madras, and which seem to have vanished from Northern India. But these once ranged throughout Europe, from classic Mediterranean to Erin and the Hebrides. In such hut villages began the civilization and history of great Rome itself; and her permanence, as through all changes "the Eternal City," is not a little explained by her loyalty to this fundamental and venerable past, this definite phase and stage of progress, at which civilization seems largely to have taken shape, and this in its main processes and forms. Round huts survived in Rome throughout her republican simplicity, her imperial world-supremacy and its corresponding material magnificence; for in Rome the circular temple of the vestal Virgins, shrine of the sacred fire their task and privilege was to tend, is but the right glorifying of the old world fire-hut, once the centre of the primitive village, and the due magnifying of the office of the village girls, who before marriage, were thus initiated to the social significance of fire, and of the hearth, with the ideals and possibilities of these fitly and reverently expressed in symbol. So the round temple of Rome as ascribed to Vesta is the idealisation of primitive home as woman's; and ascribed to Hercules is that of the home of the labourer. Some of the most sacred churches of Christendom, from Jerusalem to London, are round huts too, though idealised and developed a stage farther by the Knights Templars, as initiated beyond others into oriental traditions. The too easy and careless destruction of this venerable and primeval type of home, which has in our time gone on from Skye to Coromandel, has not merely had sanitary excuses to explain it, but an element of ignorance and indifference truly barbarian; and this not only to historic significance but to the human values and even the possibilities of this primeval architecture. To describe all we learned in the half-hour's inspection of this simple old village would exceed the present limits: enough that homes and gardens, public places and boulevards, temples and statues, even sacred ground and processsional way are all there. In short, here is a town in germ, even a city in its infancy, and this a living infancy, growing from within, as village and city should ever do; needing help and guidance no doubt, but not the present too common alternatives; which are (*a*) to be let alone till its disease, overcrowding and deterioration compel attention, with (*b*) sweeping demolition followed by (*c*) the imposition of a new plan from authorities above and without; a plan which, whatever its elements of European merit, is, as we shall see, little related to village life with its characteristic Indian customs and Indian requirements.

I

From the excursion we returned to meet the representatives of the municipality, and to study their improvements in progress or on plan. First and largest of these proposed improvements (large indeed for any city as modern improvement goes) is the extensive new suburb of Elwinpet, west of Raja Rama Rao Peta, lying to the north-west of the present city limit, upon a fine expanse of good and easily drained soil between the Valaru river running south-west, and the Dhobi Khana and its canal running south—a particularly fine situation, essentially in park conditions, since the Dhobi Khana will remain open ground and may readily be improved, while the river bank may be easily made beautiful. This extension occupies one of the largest and best sites we have yet seen allocated for garden-suburb purposes. It is moreover the most formally designed; and hence it may be taken for a more detailed study and criticism than usual.

Here at Cocanada—just as at Vizagapatam*—we find the original (largely middle class) plan has been modified, to meet a sudden popular need—the reinstatement of a hamlet which has been demolished in course of changes in the town. The block of minor (but still, as huts go, ample) sites at the south western extremity of the suburb plan has been allocated for the purpose, and some 54 of the 65 huts thus provided for are in all stages of progress up to completion. Each plot measures 60 × 60 or thereby, and since 14 feet must be left between each house and the boundary of its plot to minimise risks of fire, the frontage available runs up to 32 feet. Allowing for substantial thickness of wall and projection of roof, two rooms, each 12 × 12, are thus possible, with verandah in front and cook-rooms in verandah in court behind. Sometimes one

* Page 41 *infra*.

family (but more often two) occupies the hut. A sympathetic and competent sanitary inspector has kept an eye on the construction, so far as his other duties permitted; and no grave infraction of bye-laws has thus taken place. But though the whole of the little village seems decently habitable, great differences in detailed execution remain. Some have thrown away space, and made their rooms a foot or two too small, a very false economy and probably not an intentional one; others have roofs too low, or walls too slight, of mere "wattle and daub" instead of solid mud. Plinths vary greatly in height and finish; verandahs are sometimes of insufficient breadth; and so on.

These differences are not so much of poverty, but of workmanship. The huts are as if made by so many boy-scouts, of skill good and indifferent; and it is no disrespect to the sanitary inspector, but rather a supplementing of his usefulness, to point out that these boy- and girl-like builders need help and active leadership to improve the standard of their construction.

As boy-scouts need their scout-master and rise rapidly towards the standard he sets (and sometimes aspire beyond it), so it might be here. In all such cases then, I would suggest the employment of one or two skilled hut-builders, who would be as it were the maistri of this germ of a new city-building movement. With one or two really first-rate huts upon the site, to serve as examples to all others, a healthy rivalry would arise even were these maistris then to retire. Better still, however, if they could remain on the job giving a good turn, a guiding hand here and there as required.

The caste difficulty for each type of village need not be serious. Constructive ability has only lapsed in members of the literate classes in any country, and survives diffused in all others. A little enquiry, a modest expenditure, a small material prize or two for the best houses, and best of all, a generous recognition from the Chairman, from the Collector, and from other leading personages of the town, would rapidly set all this agoing; and house-pride again be re-established, with all that means for sanitation and for common wealth.

Again, may not the advantages of co-operation be organized for such poor house-builders? For a full-sized hut 30 feet outside giving two rooms 12 feet × 12 feet with verandah, etc., if all has to be paid for individually, the outlay is considerable, say:—

	RS.
Earth (carted from a distance)	20
Bamboos, timber and roofing leaves	40
Four doors and three windows	30
Labour	30
Total ..	120

and upon this sum, so far greater than the most that can be given by a valuator in compensation for the old hut which was demolished, economies are urgently needed.

Why should not the Chairman or some public-spirited members of the community take the initiative here (1) of organizing for these poor folk a standard rate for mud and cartage on a contract scale, rather than as separate purchasers bargaining individually? and similarly for timber, for bamboo and thatching leaves.

But beyond even this a step is needed and easy—that (2) of establishing a *Housing Bank* on the model of the Agricultural Banks already becoming so well-known (or even as a branch of one of these).

Into this Housing Bank should be paid by the compensating authority the sum agreed on, and to the credit of each person as henceforth a customer. He might supplement this by his own savings, where he has any; but instead of either cramping or jerry-building his house, as poverty may compel, or going to the usurer if he desire better things, let the housing bank provide the needful balance on its moderate terms. The man would still put his labour into the house as before, but the Bank would see to it by providing the master-builder (the working maistri suggested above) that the house was made a good security for the loan, and thus also the best possible dwelling for its occupant.

What impediment or what limit is there to such a "house-banking" scheme? Is not this a far safer and surer method than the present one, of paying cash compensation for demolished houses? The sum is usually insufficient at best; and thus from the recipient's point of view is so useless for its reconstructive purpose that it may far better be spent in paying debts, or in family needs, if not sometimes in consolatory festivity!

When one's old house is left, one never finds quite the same level. The usual tendency, after city clearances, has been towards a lower one. Yet the whole excuse and pretext of such clearances is to establish better conditions all round. It is time to be taking far more definite steps towards this than have the municipalities as yet, whether in East or West. Let us then give a Housing Bank a trial.

With leading citizens thus co-operating with leading villagers in such a scheme, the further improvement of dwellings would at once come up for discussion; and, with these improvements, the furnishings as well. What element, in the economy and house furnishing of any peasant people of Europe, is more satisfactory, more hygienic and more economic than the row of great jars, for rice and other cereals, which at once enrich and adorn the old fashioned homes of India? That these are today too rare is no argument for "laissez-faire," but the reverse. These jars are not simply the savings bank of the house-mother, though that is much; they place her in greatly more favourable conditions for effecting economy, by means of seasonal purchasings, than she is in in her present necessity of buying daily handfuls at the bazaar; and thus wages go further, and falling into debt is avoided, or at any rate mitigated.

It is the gravest ignorance of the time, the utmost sign of lapse of that substantial economic intelligence which should guide peasant, financier and statesmen alike, that our present money economy lays no stress on the essential and basal economist, woman. Yet the Bank of France is the "long stocking" of the peasant woman, and the Bank of England quite fundamentally "the old lady," and so the real Bank of India is the peasant woman with her row of jars well-filled. (Has she not thus been depicted upon bank-notes? If not yet, then the worse for them!)

Famine relief-works have too long neglected this essential of famine-prevention: and among our needed village maistri, the potter must again be given his place of honour (perhaps by and by the granary-builders as well). But with this large space given to the row of pots, the house will be too small? With such reserves and for such purposes, we can afford (as in poorer conditions people were wont to afford) the needful additional house-space.

Nor is this all. The housewife, thus reinstated in her true economic place, as maintainer and storer of the whole world's real and material wealth, will now take heart to complete her treasury. Brazen pots and copper vessels will again be piled up into shining columns; a great chest, wrought with something of the old beauty of craftsmanship, will take the place of the squalid little box, which at present holds her scanty belongings; and by the time her daughters come of age, a worthy dower-chest and bridal coffer, with well-woven draperies as well as jewels, will often have been added to this home-savings bank as of old.

To this home-making thought and life, upon which woman so normally concentrates, every vital element of the past may and must return; those of the present and opening future must be added as well. With the increase of goods, shelving becomes necessary; and whenever this is introduced for food, there tends to be less waste upon the ground for rat breeding; where fowls are kept, as is on the whole desirable (outside), the perhaps inevitable rats may be trapped by the appropriate municipal functionary. So also finer elements appear: the shrine, with its mythologic pictures, the tulsi plant, and so on. Housewives such as these reappear instinctively with every chance we permit them. That in Bombay or Delhi or too many other great cities they may be thought rare or even dying out, is simply an indictment or a confession of the inefficiency, and worse, of their housing, whether officially or privately supplied. That in the colossal chawls and dreary cooly lines, and kindred abominations, high-storied or low, concrete or corrugated, of which I have seen too many in Indian cities, womanliness and decency should survive, is no thanks to them, but supreme evidence of the strange tenacity of life. It is thus most hopeful that in-

these smaller and saner cities like Cocanada, like Vizagapatam * (and I trust elsewhere in this Presidency) this collapse of the housing movement, into a ware-housing and rent-farming one, has not taken place. By the development of such saner methods, this catastrophe may be averted—and why not even arrested in the great cities where it has begun?

With all respect, however, to the Cocanada Council it may be pointed out that these simple huts hardly needed the spacious avenues and the regular conservancy lanes on which they are now located; and further, that a study of an old village of round huts such as that mentioned at the beginning † of this paper would have resulted in a more natural, and more congenial grouping. However, the work here is done; and the planning of a hut-village may arise more naturally at some other point of these studies.

II

Let us turn now to the general plan ‡ of Elwinpeta for its more prosperous and middle class purpose, and for pakka houses, as far as may be. The plan however is disappointing at first sight, and this increasingly so, as one scrutinises it in detail and in general effect; and correspondingly in expense also.

Note for instance, the false symmetry which assigns a school and a choultry, and a reading room and a bazaar to four sites at the corners of the square, all of equal size. Is a bazaar no bigger than a reading room, and can its growth be thus defined? If not, is it town-planning to attempt this? I assume that the general orientation of the main avenues (about 30° E. of S.) is correctly adjusted to the prevailing sea-breeze; but am not quite assured of this. Otherwise the lay-out might with advantage have utilised the fine rows of palmyra trees.

There is some differentiation of size of the avenues, as of 45 and 34 feet. Yet surely those which are to be the most important thoroughfares, connected with the existing streets of the town, ought to be larger than those minor streets of domestic use which make up the rest of the network? To the central entrance avenue from the south I should give 60 feet, and to those entering from the east side, north and south of the central square an increased breadth also, say 60′ and 45′ respectively.

It is much to have left a central open space. But why a practically exact square? It is the form which gives least facility for games, admitting few groups at once. It also has shortest frontages and fewest houses. Is not this plan like that of the thoroughfares, essentially a product of office drawing-board, and instruments? and not a design thought out upon the field, for the uses and pleasures of the future community's life?

The reservation of the neighbourhood of the square for the larger plots is plainly neither of Indian nor European village traditions, but is a direct imitation of that separation of classes according to wealth which (since the industrial revolution only) has become characteristic of British cities. Has this been decided on by the Cocanada Town Council, as worthy of imitation? or are they simply copying from the work of some London draughtsman, to whom the notion that squares are for the well-to-do chiefly, and not for access to the people, has become habitual? Note moreover that far better properties may be given to well-to-do people along the irregular margins of the property if these be not spoiled by the present complete circumferential frontage of conservancy lanes: a feature new to town-planning design indeed, but not one likely to be imitated. In any case, the succession of seven streets and eight conservancy lanes which runs to northward of this square, without any break of open space, is poor and monotonous designing (or rather "drawing-boarding") and should be reconsidered. Does even the existing type-design permit this? I have seen nothing quite so mechanical since I last passed through the mining villages and manufacturing towns of North England, and the Midland "Black Country"—why should Cocanada accept these for imitation? How has it come to do so? Have we here a clue to the local origin of the particular English designer who has inspired the Cocanada draughtsman? In any case may not some better tradition be found than this? True, it is derived from British sanitary bye-laws, but these the earliest—of about 1858—with their enormous product of mean streets in our industrial towns;

* For note of Vizagapatam, please see page 41 *infra*. † Page 2 *supra*. ‡ For this please see after page 16.

not from contemporary town-planning at all. Town-planning in fact as at present practised in England and elsewhere may be described as an endeavour to get beyond this style of planning altogether. It is happily here not too late to suggest that an alternative plan of more modern type be considered.

First, however, a difficulty arises, a frequent suspicion, a common dread. Those not clearly informed of the differences between the bye-laws of (say) 1860 and those rendered possible by the Town-planning Act of 1910, are at first apt to suspect that the more modern style—because obviously of pleasing aspect, it may be even beautiful, with its larger gardens, its pleasant avenues, its pretty lanes, in short its cheerful varied and artistic character—is thereby more expensive than the sober utilitarian monotony which it replaces.

But on examination and comparison of estimates, the exact reverse turns out to be true. The dull gridiron was the expensive plan; the varied chequer is cheaper as well as better and this at every point.

How is this? First, because no way of treating land not actually covered with buildings is so costly as to make it into road-ways; and none is so cheap and so productive as to save as much as possible of it for gardens and fruit trees.

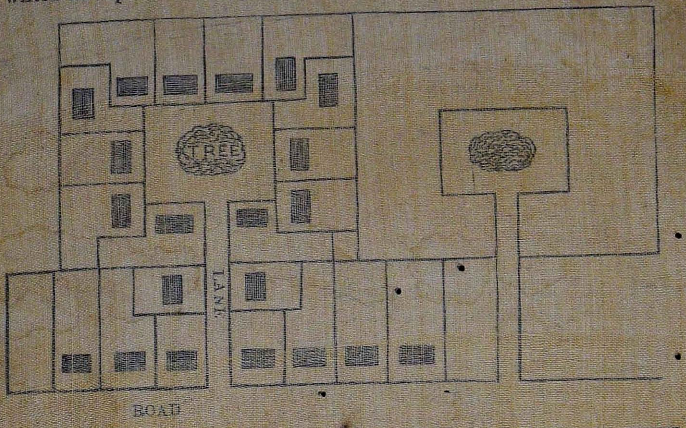
Second, because no way of planning uses so much land per house for roadways and conservancy lanes—in this case no less than 8 miles on the pattern here adopted!—while on garden village lines one half of this should suffice; indeed probably less may really be necessary.

How do conservancy lanes arise? In continuous thoroughfares, it is obviously inconsistent with amenity, and for Hindus incompatible with propriety, caste and religious feeling, that the sweeper with his burden should pass through the dwelling; and where building is in continuous "terraces," a conservancy lane is the only solution of the difficulty. But here in the country, where the plan is not of new streets at all, but of a permanent garden suburb, with houses all to be detached, there is no necessity for these lanes at all! Enough if we have at one side of the road frontage of each house a separate and special outlet for the sweeper attending the house latrine. That is, if there be one, and in spaces of the sizes proposed (from 120 × 75 to 60 × 60) there may well be. Even if continuous rows of buildings are erected, with *common latrines adjacent*, this vast amount of conservancy lane is not required—and will only serve as a temptation to dirty habits.

I recommend therefore that the conservancy lanes, which total about four miles in this suburban village, be given up, as mere unnecessary extravagance. The space may be added to the adjacent building sites. This space need not be regularly halved. Some people may wish no more ground, others may be willing to take the whole addition of 13 feet; what matter if the boundary line between back gardens now brought together, be not straight throughout. The great improvement is that instead of four miles of dreariness, and with expensive fence or wall to keep out the unknown public of these squalid thoroughfares, we have 5,280 feet × 4 × *13 = 274,560 sq. ft. of ground saved from roads altogether, and this area made available for better uses—say $6\frac{1}{3}$ acres as well as the cost of its metalling saved. But the large central square (of 668′ × 679′) is only about $10\frac{1}{3}$ acres. The magnitude of the proposed saving and gain may thus be realised. Thus the crowded northern half of the design may now be provided with a large open ground also, if that be preferred to (alternatively) increasing private spaces. We may choose something of both courses: *i.e.*, give several of our six acres to each purpose, perhaps the best solution of all.

The main and secondary avenues still remain; but are they all needed? Not by any means; again a substantial area may be saved. At Hampstead, the wealthiest garden village in the world, one never dreams of such extravagant proportion of roads to houses as here. The main avenues which run at right angles to the many parallel secondary avenues of houses and their conservancy lanes, are necessarily much the most expensive, for ground, for area metalled, and for upkeep, and here in Cocanada bear no houses at all; these are distributed entirely over the secondary avenues. In Hampstead the main avenues bear houses along their whole length; while side roads (sometimes avenues) but often shaded only by garden trees (and thus even reduced to the breadth of lanes) are found amply to suffice for the whole needs of a far more luxurious and vehicle-using population than can ever occupy the present city suburb of Cocanada.

The method is that of house-grouping. Its principle is simple enough as per diagram; which is capable of many variants (through-accesses to begin with);



and the economy is no less clear. But now these groupings, with their varying sizes and proportions, their positions and accesses, are indefinitely open to varied requirements and design; and a complex order, of architectural unity amid variety, replaces the dreary and mechanical monotony of the stock pattern imitated in the plan of Elwinpet. Each row, each group, each house, may now be treated individually, and the needful variety of true homes, thus appears. *House-pride*, that great incentive to city improvement and family well-being, now becomes possible; whereas, when all the houses wear the same "sanitary" uniform and ranking, steady deterioration, of street and family together, is not simply threatened, but as our British bye-law streets and towns have for half a century been so comprehensively showing, is practically ensured. Why begin here to adopt and repeat this mistake, when the ruling country, supposed to be imposing such bad plans, has nearly five years ago passed the Town Planning Act with the express purpose of getting rid of this bye-law monotony for ever! If so, is not a plan like this too seriously behind the times?

Take it next in details. Are these square plots really designed for Indian homes? Are they not simply copied from English bye-law towns, as suitable to the square villa or the squarely rectangular cottage? This square plot is moreover again an expensive one, because its slight economy in fencing is overpowered by its increased proportion of road-way frontage, with corresponding expense of construction and upkeep. Who wants to pay for 60 feet of this, when less will do?

To narrow the holdings as much as may be consistent with safety from fire, and to lengthen them backwards from the road will thus be fresh economy. Moreover, this shape fits far better the type of the Indian house, which tends to deepen backwards, and to make its additions in privacy behind. On the present square plan the occupant is prevented from enlarging his house, and illicit overcrowding must and does arise accordingly. Whereas if space to lengthen be given, additions can be made, and overcrowding prevented. The very best method of economy, that which permanently enriches family and city together, is rendered as far as may be impossible upon this existing plan; whereas it is the best use of the planner to provide for this.

Let us see then whether this principle of respecting the Indian family and home, and providing for the growth of both together, when sons marry and bring home their wives and have children, of whom a proportion may some day ask to be housed in turn, cannot be brought into our altering and developing plan? If so, we shall have made a step towards arresting that direful combination, of Indian family overcrowding with European slum-planning, which is now too frequently beginning in Indian cities.

Towards realising and designing what is needed, a convenient illustration, primarily for the European reader, but quite intelligible to the Indian, may be taken from the planning and allotment of graves in a cemetery. Only for paupers or in

time of pestilence or war are the graves kept close and side by side. In ordinary conditions, after a grave has been allotted to a member of the family of A, at least the next place is kept vacant, in view of its reasonably probable requirement by and by for another member. Similarly for B, C, D, and so on, so that family associations are respected; while the cemetery, planned as it was for the needs of more than one generation, fills up in the end just as rapidly, but more satisfactorily, than one of the stricter arrangements of regular rows. Surely only the dullest of planners would seek strictly to maintain the pauper and pestilence method as "regularity," or think this family method "mere irregularity." Yet this is what plans like the present do for the living.

The living do not yet receive this consideration from town-planners. In the desolate individualism of European cities since the revolution in industry and politics towards the close of the eighteenth century (to which we no doubt owe much, yet whose defects are still vitiating our twentieth century thought and life), we have come to be satisfied with inhabiting a number in a street row, isolated for practical purposes, as completely as by material death, from our neighbours on either hand; and with our friends and our grown up family scattered indefinitely into similarly isolated conditions. Family and kindred, neighbourhood and village, all these have vanished from our western "progress"; and with consequences to town and city which need not be enlarged on here.

The point is, that with our European stock-pattern, we now tend to introduce into India not only our western home, with the family reduced to its simplest expression, but necessarily with this, its independence of all others. Thus in our cities our right and left hand neighbours in the same street are usually unknown to us, often even by sight and name; and our kindred and friends are scattered. How different the Indian household with its grouped families around the old grand-parents; its collaterals as well. To the superficial European eye this may seem "mere overcrowding"—but though overcrowding be its often dangerous consequence, we forget that to the Indian eye our system seems little better than homelessness.

The respective advantages of these methods have often been argued; but it is not necessary to enter further on these here. Enough that the people we are here providing for belong to the Indian type, and that the plan which has been chosen for them is not only by the European, but for his limited family. Misfit is thus assured; and if this be so, we need not pause to apportion blame; but rather to try to design more in accordance with the nature of the families we have to provide for, in their needs and growth.

Return once more to our type-diagram above—that of house-grouping. This was introduced simply to show how roadways are now a days being economised, and gardens enlarged accordingly. But its building lots may now be lengthened backwards, and narrowed in frontage, so further diminishing road-lengths, and simplifying and shortening accesses.

Assume now that more land is available, and note next what happens if we apply some of our economy of roads to extending them, to something like their originally contemplated length. They can serve more houses: or, like the graves of the illustration used above, these houses need not at first occupy every plot in the continuous order preferred by builders and land speculators hitherto, but rather be allotted with spaces intervening. We thus obtain a new type of village plan; more spacious than heretofore. If we leave this ground vacant to weeds or to untidiness, criticism will fairly arise; but why not plant it with fruit trees to shade and enrich the future house when it is built? Meantime it may be let to one or other of the neighbours (of whom there are not only two, but five convenient enough for easy access); or if a number remain unlet to these, they may reasonably be let to a market-gardener, who may cultivate them more easily than he could have done the more detached strips of his native village.

Consider now the many advantages of this mode of suburban expansion. First its escape from European isolation, and its adaptability to Indian family needs and growth; next its economic appeal to real saving, in larger and better buildings. On the official plan the house once built is practically unalterable; on the proposed plan it may be greatly extended and improved, especially where lots are taken together.

If there be one aspect of Indian family life which should readily impress the thinking occidental (or even the thoughtless), it is that whereas only few with us, even among the rich, possess hereditary homes and their associations, these tend to be the rule in India. The more one sees and learns, the more it becomes plain that if not exactly the same elements of house-pride and family pride are present in both cases, at any rate truly equivalent ones. In this way is not our garden village not only escaping from its English nineteenth century bye-law streets into the better contemporary style? but beyond this again, to renewal of the essentials of the large family life and sociability of India?

III

So much for criticism; what of reconstruction? For that we have to leave the notion of planning as the making of a symmetrical pattern on paper with drawing instruments, and in imagination wander through the streets of our future town creating them as we go; and searching out the best position we can devise for each of its needed buildings and institutions. Differences of opinion will of course arise among us; yet some consensus may be reached. Hence the writer may be fairly called upon to offer his solution of the problem presented by each building, and to give his reasons.

Bazaar, School, Reading-room and Choultry: what conditions should determine their respective positions? Each may best be near the centre of population; this defines them north of the central square; and upon its main avenue for convenient access and good aspect. But the Bazaar does not need a park frontage, which is better left to dwellings; moreover, since this main street runs east into Raja Ramaraopeta, which has still to be developed, our bazaar may gain custom from this side as it grows, and also be near town and railway for its supplies. No one, however, can predict the future growth of a bazaar, hence twofold foresight provides (*a*) side street accommodation for expansion, (*b*) a small public garden space to northward into which its activities can overflow, and its busy shopkeepers also at times take the air.

The Choultry, as a lodging which leaves its residents to buy their food, may conveniently be near or opposite the bazaar, and on this main road to railway and town. It needs a good and conspicuous gateway, but its main area need not take up valuable frontage; quietness for its travellers also suggests the cheaper interior situation shown on plan.

The School is shown fronting to both the large and the small open space, of which the latter may serve as play-ground. The usual play-ground space is still shown, but now as a school garden. The introduction of school gardens has long been justifying itself. In France, in the United States, and in Russia, every school is expected to have its garden; and our tardier Education Departments in Scotland and England have at length fully begun to follow their lead. (In Madras we have an example in the excellent school garden of the school organized by Mr. C. B. Simpson for the employés of the Buckingham and Carnatic Mills — an undertaking well worthy of civic appreciation.)

The Reading-room may be placed in the same neighbourhood, at the foot of the school garden upon the avenue. It is here conveniently reached by the public, while its association with the school would give it an increased usefulness, and pupils and teachers alike a far more vital interest in reading. As temple, church or mosque come at any time to be desired, fitting situations may be found at the ends of the main perspectives looking westwards towards the present boundary of the village.

A village Hall need as yet hardly be provided for. It is better that the school and the reading-room be planned so as to admit of meetings, lectures, concerts, etc. Such a school hall (or even reading-room) may well have a stage at one end: again an accessory of admirable value to the school, indeed a resource of the very highest importance for raising our schools from their too frequent tradition of mere memorising to the vital apprehension of literature; as from sing-song to true music.

The beginnings of a Museum find their place also in the school hall; that of an Art Gallery also; though portraits, historical souvenirs, etc., may best adorn the reading-room.

Public fountains should not be reduced to the mere water standards which are shown on the plan, but treated—as throughout the whole past of civilization in all worthily designed human groupings for villages, towns or cities—as befits their purity, their usefulness, their accessibility, and conspicuousness, and also as the natural and beautiful centre around which the domestic labour of woman and her social intercourse so naturally converge and radiate again. From the economy of space we effect by the reduction of unnecessary thoroughfares, etc., we can thus easily afford to assign full space to each fountain, with its seat for rest, its shady tree. With a little sympathetic study and observation of the best examples, in Cocanada and elsewhere, these fountains may each be given a character of its own. To one a banyan and to another a pepul, to this a mango, to that another fruiting tree, to there again their varied group of palms, and so on. What better and simpler return in health, happiness, and general beauty by thus simply developing each of these characteristic points of our village; instead of leaving it in that too elementary crudeness which remains when the work of Engineer or Sanitary authority is left in the raw?

Returning to health, we note that in too many cases the proposed fountains are well over 200 yards apart in a straight line. In these cases a woman midway has 100 yards to walk; but at the centre of the block she has 200. This is too much for young wives, for child-bearers, for the ageing.

Hence I should introduce into the centre of several such blocks on the accompanying redrawn plan * an additional fountain. I admit the extra capital outlay this involves, but this is well justified in daily economy of fatigue. Water is also assumed as provided for school, bazaar and choultry.

A simple form of drinking fountain is coming into use in Europe which may be of value in India; indeed is probably already known. No cup or tap exists, so that caste-contacts are avoided. One simply presses a button, and a light jet of water issues; a tiny fountain, but only at the ordinary human height indeed rather less, so that one may stoop towards it, and catch the stream in one's mouth, while the falling and wasted drops do not pollute the place of origin.

What other elements of use or pleasure may we provide? One of the most excellent features one can see in an English garden village is that here and there a little nursery arises, with its flowers, and vegetables, its saplings and young fruit-trees; for the gardener is here invited to settle, and if need be, encouraged by easy rent. For he peculiarly aids the extension of the village by beautifying the gardens as homes are built.

It is one of the most curious arrests of contemporary minds that our excellent and ardent sanitationists, with all their concentration of mind upon the material process of evacuation, still neglect that fruit supply which is probably the central resource provided by nature for regularizing and normalizing the whole alimentary system. The world's literature of medicine is at present well-nigh dominated by the theory that all kinds of disease originate through auto-intoxication, by absorption of unwholesome elements—"toxins"—from the bowel; but as yet the physicians are disputing the efficacy of the strangest drugs, the weirdest treatments, the most heroic operations, and overlooking in each country the simple and delicious remedies provided by nature and her gardeners from time immemorial. In the cooler north, "the apple of knowledge" with its brain-clearing proof of wholesomeness, "the olive of wisdom" with even subtler digestive (and mental) values, and many others, are again beginning to be rediscovered. The healthy Arab has never lost his allegiance to the date, and so on; but with all the resources of India, it is a real reproach, and this alike to her old castes and races and to the governing one, that her fruit-resources are still so extraordinarily far from being improved, developed and diffused as they deserve.

Why not, then, give to this village a new individuality, beauty, health and wealth, an influence and example also, by planting her very avenues with fruit trees (as is so largely the custom of continental European countries) and correspondingly give every plot its start of fruit-trees as well as gardens? A garden suburb is much to establish, but an orchard village far more.

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* The third plan after page 16 *infra*.

The objection is of course constantly made—"what an expense for watering!" But one should not forget that, after three or four years at most, the tree in ordinary conditions needs little or no watering; further many orchard trees yield more return than ordinary crops, and cost less both for watering and other labour of the year, so that the small initial outlay is sound economy. Moreover, trees hold up the water-level, which falls without them. Hence to abandon tree-planting is not merely to accept desert conditions, but to aid and establish their victory!

The provision of a tree-nursery plot is therefore suggested upon the plan,* though some other location, depending on soil, etc., may be found to be a better one. The park and avenue trees should be as far as possible fruit trees, and where roads are shown too narrow for public avenues, it is recommended that these be replaced by the simple and inexpensive method of setting-up building (and planting) lines. That is that the strip of land which is given up to the householders by the narrowing of the public avenue should not be encroached on for the building of their houses, but be planted with trees, which for the poorer streets at least may be provided from the Municipal nursery.

In this matter of fruit-tree planting, may not such an example as that presented at Bangalore be suggestive to Cocanada?

IV

We are next taken to the two old and congested villages of Malapeta and Indrapalli, the improvement of which has long been under discussion in municipal circles —so long indeed that a dramatic little incident arises as we pass through. An old man of strikingly patriarchal aspect, obviously still one of the leading elders despite the coming on of mortal disease, comes forward and delivers himself of an impassioned discourse, rising to anger like that of an ancient prophet; and this is interpreted by one of the Council as his upbraiding protest against the delay of improvements, first promised long ago, and again year after year.

Yet what is the unlucky Council to say or do, when thus roundly scolded by its constituents? With its limited resources of land and money, of organisation and town-planning, how is it to deal with such a large and old and ever-increasing accumulation of practical difficulties as these villages present? The dilemma is plain, and the Council is on the horns of it; the problem viewed in detail seems too complex for small improvements; yet viewed as a whole, it seems too vast and costly for comprehensive measures. Little wonder then that municipalities leave their slums so largely alone; yet meantime they grow worse, and their problems must soon be grappled with, and that thoroughly.

What help can a stranger give, with only the experience of a half-hour's visit to guide him? With as much time as that spent on the plan of Elwinpeta one might evolve something; but apparently no adequate plan of these old villages as yet exists. I ask for it. Meantime one ventures to point out that the place is far from being all bad; indeed that there is much good in it, and this even of places, of houses —of homes, that is—and of people.

What if this difficulty of the municipality were made the people's opportunity? If they have one "grand old man" like the orator who castigated us, have they not also others in the making? and with such as these may not some moderate improvement policy be talked over and planned out?

Despite obvious dirt, neither municipal sanitation nor private cleanliness is wholly wanting, indeed both are on a better level than we have often seen elsewhere. At present, here as everywhere, each goes on its own way independently: why not in steps?—in time? in tune? As we travel, in fact in every city, we hear much from the sanitary authorities about their difficulties and disappointments with their people; while the inarticulate people go on in their old ways, with disappointing indifference to their constituted authorities, and their regulations.

But if we do not catch our fish, what good of scolding them? Must we not rather improve our bait? If we cannot teach our children, what good of punishing? —must we not reconsider our methods? So it is for sanitation. After hearing from the authorities, in a dozen cities, of their disappointment with the people, and verifying too, as the simplest observation must, the grounds of this, one yet feels that the people are not yet successfully appealed to; and that the new pedagogy of sanitation is at least as defective as the old pedagogy has been.

* The third plan after page 16.

Here it is not for a passing stranger to take an active lead. Still, one can tell Cocanada of how in far more crowded and uncleanly slums, and these in that city of the British Isles whose familiar epithet is "Dirty", a new co-operation has been arising, between landlords and tenants, shopkeepers and customers, rich and poor, citizens and municipality, and how this has been gradually taking form as a definite movement, of Neighbourhood-Brightening and Betterment; until the first neighbourhood, one peculiarly and not undeservedly looked upon as one of the most backward of the whole city, achieves an improvement so distinct as to make it an example to the others.

One is of course told that "this may be possible in the West, but far more difficult in the East". But the more one reflects upon this criticism, and the more one sees of the Indian village, and town, the more one becomes convinced that in most cases the very opposite view might be more easily defended. Why not therefore justified in practice?

For what European has ever seen at home anything which fully corresponds to Pongal? To realise this we must combine at least three of our high festivals. Of these the first is the temporal one, known as "spring-cleaning"; but this is nowadays merely of material and sanitary endeavour: it has lapsed from continuity with the spiritual spring festival of Easter renewal and inward purification, of which it was originally the outward part. Were this renewal of material sanitation with moral arousal again accomplished, the *public health* department of our medical profession, and the *public holiness* department of our clerical one, would again become one, as with every priesthood of the past.

The European may probably answer that this is Utopian. Be it so; it is however historical: and we are not here concerned with western cities, but with the simpler improvement of the Indian village, the checking and mending of its incipient slum; and the important point where the European sanitationist fails (and with him his educated Indian supporters, municipal or other), is that he forgets that for the surviving old-world communities of India as for our own western origins, health and cleanliness have been traditionally approached, not directly as we now do, but from the side of religion, that is to say of public festival and ritual and of personal participation to suit. "Pongal" may thus be made a name to conjure with, more potent to simple ears than "Microbes", "Rats", "Drains" or other contemporary western slogan, too humbly sanitary as these are.

Putting this criticism of our sanitary methods in another way, we may say that while the civil service commands and leads as Kshattriya, the sanitary service too much fails to do either, because it appears and speaks too much as their mere sweepers! Whenever it reconsiders its standpoint and approach, and incorporates into this the idealistic as well as the material cleansing of the Brahman at his best, its appeal, its influence, and effectiveness will really begin.

Pongal then, at once Spring-Cleaning and Easter, is also a New Year festival; and the potentialities of its effective renewal are thus complete. It is often said that it is in decadence, though this is far from true everywhere; but the probability is that no old custom in India would be easier of renewal, because none is more natural, or more feminine; none also of more immediate satisfaction and reward.

Diwali is of course the analogous festival in Bombay, etc.

V

Already of course, there is some co-operation of Municipal cleaning with Pongal, but this still merely of carting and sweeping. In some village, as an experiment, may not the city authorities lead as well as follow? May they not begin draining, cleansing, levelling, removing old broken down and vacated huts, clearing old sites, and so on? It may be said that these are private property; but this has often lapsed, and where at any time the owner again turns up, it should be easy to compensate him elsewhere, or even to reinstate him.

Some here and there—few no doubt, but still a few—are willing to sell their property, and others to exchange old lots for new ones; let us deal with these. Even though the new sites thus acquired be not continuous, never mind; they will increase in number year by year, and compulsory evacuation thus be minimized (though doubtless also prepared for!). In this way, at moderate cost—in fact trifling cost

compared with that of ordinary improvement schemes—the overcrowding of a village may be abated. When a third class carriage is overcrowded, we do not need to turn out everybody, still less to knock the whole seating down; by removing a very moderate percentage of the passengers to another carriage, the rest become comparatively comfortable, and a very little more of such treatment makes them easy. So exactly it is with an overcrowded village, street or slum; and the difficulty, say rather the clamant injustice, say indeed the gross and dreadful oppression of the poor, which has grown with city improvement throughout the cities of the west, and is also becoming far too common in India—that of raising rents by reducing the number of available houses—if not yet completely avoided, is at any rate minimised.

It is most important for every one interested in town improvement to consider very carefully the meaning of the phrase "*reducing congestion*" when applied, as it constantly is, to the piercing of a crowded area by new thoroughfares. For in practice (in spite of regulations and amiable resolutions) this process has historically been, and generally is still, unassociated with any adequate supply of new dwellings for the evicted people. In the past, for the most part, no appreciable supply has been attempted. *Now*, it will be said, it is constantly being legislated for. True, but as yet ineffectively. Legislation and administration, Central and Municipal alike, can potently aid existing economic tendencies and agencies; thus, where the question is of destroying poor men's houses, on the ground of their insanitary condition, and consequently of aiding that rise of rentals (which is the natural desire of the house-letting class) the legislation is at once carried into effect. This rise of rentals then takes place, often by leaps and bounds (in fact literally often beyond all past dreams of avarice).

But when it comes to reconstruction, at any rate any reconstruction which will satisfy the demands of the sanitationist, that reconstruction cannot be done. In the first stage the sanitationist can carry all before him as the sweeper of destruction, and with the ardent approval of the great monied classes who stand to profit by his enthusiasms. In the second stage, that of which he hoped himself the pioneer, he is powerless; only the builder class, a far poorer one than the propertied class, can gain; and these only when they work for the trading and other prosperous classes who were not thus displaced. Again then our sanitationist's caste limitations are in the way. Last time we saw they impeded his usefulness, but here they negate it, and often far worse. In any case, to be the sweeper of the rent-farming and money-lending caste is a poor achievement; and though he may feel and admit this sarcasm, it is not easy to escape from it. In fact it may be asked in what city in the world has the sanitationist yet devised and applied a policy safe from these criticisms? What sanitationist, in fact, has yet given his mind to civic economy at all?

But these criticisms do not apply to us in Cocanada, it may be said. Certainly not; not until what are called "vigorous sanitary measures", "improvement of congested areas" and the like are begun. Then of course, their prime result, that of rent-racking, will as usual follow. For the present we are but using the experience of other cities as a warning.

What if the possibility of this and sister cities, upon which western economic pressure and example have not yet fully impinged, be to avoid these evils? Why not?

In Vizagapatam * we have already had an instance of this. In fact is not this very much what the Cocanada municipality is actually proposing to do? Ample land is available near the railway, a little to the eastward, which by a little filling in can be made suitable for building at no great cost; so that the process of village resettlement and renewal, which we saw upon a small scale as the beginning of Elwinpeta, may here be carried on even in an improved way, along with the gradual weeding out of the worst houses of the old village, the improvement of those that remain, and the conduct of the necessary removals as far as possible without breaking social and family groupings. If the criticism of the hutting along the streets and lanes of Elwinpeta be admitted, it follows that the drawing of a village plan of simpler and more economical type is worth consideration. The problem is not so simple as it seems; but if we succeed with it, we shall have solved one of the oldest of puzzles, that of preserving the rural simplicity and sociability of the village, yet enriching it with the essential advantages of the town.

* For the report on this town please see page 41 *infra*.

VI

The next problem arising for discussion from the perambulation of the town is that of the park some time ago projected, upon the irregular and at present very useless, but easily reclaimable swamp land east of the railway. That this would be a useful outlet of the growing town, and a playing-field for its youth, is obvious; in fact young Cocanada is already in evidence there.

But one is told that the Government has discouraged this project and given more or less strongly the impression that it considered Cocanada still too poor to entertain such a project. Since every town-planner naturally thinks of a town as too poor if it *has not* a park, one naturally enquires further into this adverse decision, or at any rate discouraging opinion; and endeavours to make out upon the town map what the extent and boundaries of the proposed park actually are. Puzzling arises; the map is not clear, nor up to date, in fact here as almost invariably when tested, it is misleading. Instead of the proposed park being, as the map suggests, of enormous extent, with corresponding expense for filling up, levelling, fencing and planting and the rest, great part of the land thus shown turns out to have been already acquired by the railway for its future extensions; and when this boundary is inserted, the space looks more practicable. But this again has to be studied in relation to the Government land to the north, the future town extensions to the south, and so on. In fact, the whole area has to be planned; and when this is done, the proposals of the municipality for a park, and indeed also boulevard reaching down to the ever-receding sea-front, will for the first time be intelligible on their real scale, and in their general relations, and the Goverument objections above referred to can then naturally be reconsidered.

The case for accurate Improvement Plans, and also for a general town-plan embracing all of these is thus once more clearly illustrated.

VII

Meantime, and probably at least in part from this check to a large park scheme, the question of small City Gardens has been mooted. What are the "pros and cons" of these? First the cons. To many, such small gardens seem but trifling, yet expensive. They favour special localities; they delay larger park schemes, and so on.

Here as in so many other cases, Indian cities tend to follow, and also tend to have impressed upon them, the example of English cities and towns, with their qualities and defects. It is the advantage of London for instance to be comparatively rich in great parks; and of its environs to have public commons. For its richer quarters, it has however also squares, usually restricted to the uses of immediately adjacent residents. But the people? Practically these only reach the parks on Sundays and holidays: thus the need has become felt of providing the working quarters also with open spaces, the equivalent of the squares as far as may be. Hence the rise of the "Metropolitan Playgrounds and Open Spaces Association," which in the last thirty years has opened many scores of spaces to the public, and these of all sizes, and on all scales of gardening, from acres to yards, and from parterres and avenues to a single tree and seat below. Each and all of these has been found fully to justify its existence, and to act favourably, alike upon the health and happiness of the districts improved. There is no question of favouring this or that municipal ward, for by this time everybody knows the policy of the committee is to make its spaces and gardens everywhere, yet only as opportunity arises, and land can be got on practicable conditions. This association is still a private one, but its influence and example have been of the greatest value to the London County Council, whose generous policy as regards public spaces is not a little due to the education of their constituents by the long-continued and modest beginnings of the private society. In Edinburgh and Dublin similar movements are in progress: in fact, Edinburgh may perhaps be peculiarly referred to as a city relatively well supplied with public parks and gardens; yet every addition of open ground, however modest, is immediately found of popular use. For children, and for women, who cannot readily go far from home, yet are not without some leisure between the preparation of meals, these small gardens are of the greatest value.

Again, instead of British cities, consider those of the Mediterranean, which by climate and conditions as well as distance are so much nearer to India; in these the advantage, use and beauty of the small public garden has been established, and this for centuries past. There need thus be no hesitation in opening municipal gardens in any and every quarter as opportunity may arise.

One very good way, adopted in various towns, is to lay out the ground around the Municipal office itself. Here in Cocanada, it is most gratifying to find the ground around the water-works and reservoir planted as an orchard and garden, and not left, as is too frequently the case in cities, as a mere administrative desert of over-jealous sanitation. It is true that the public cannot be freely admitted to the city's Tank; but here, with a very moderate outlay for fencing, a fairly large and pleasant garden can be granted to public use, without interference either with the reservoir or with the proposed extension of the filter-beds, etc.

The large playing field of Elwinpeta is also a step to the establishment of a park system; while it will be noticed as a feature of the re-drafting of this plan already referred to, that the extension of this open space is proposed, and with small public gardens as well.

The opening of the reservoir garden may at first alarm those who realise that its fruit trees bring in a certain income. But the public soon learn to respect the fruit trees; and if urchins plunder, it is only after all a physiological evidence of the want of fruit, and to be met not by mere punishment, but by a more liberal policy of planting, through roads and avenues everywhere, until falling fruit is so abundant that no child or poor wayfarer needs to steal. This state of things actually exists for hundreds, indeed in aggregate thousands, of miles upon the roads of Europe —indeed there are regions in which the fruit trees pay for the upkeep of the roads. Why not more largely in India? Why not here? What better investment for water than to start them?

VIII

An element of excellent promise in Cocanada—one doubtless helped by its Dutch influence, and its own fishing and mercantile population—is the maintenance of a higher standard of public cleanliness and conservancy than in other towns, which need not here be particularized. The suggestion * has been made to the chairmen of one or two of these that it might be of advantage to send their sanitary inspectors on a short visit to their colleagues at Cocanada.

IX

As already indicated, that deficiency in properly drawn town-plans, which is common to most towns, is very manifest here; and any attempts rapidly to grasp the lay-out and general conditions of the city, still more to go into details, are constantly hindered, and sometimes thrown into perplexity and confusion, too often even positive error. The waste of time, energy and temper to any one who endeavours to identify his position upon this plan, at any of a dozen places visited, is not necessary; and the town-plan might and should be broadly rectified and brought up to date by the new city engineer without waiting for a new survey. A register of births and deaths is expected to be kept up to date; why then should the erection or disappearance of buildings be left unrecorded, often for any number of years? Even so important a matter as the demarcation of railway, government, municipal and private property is left indistinct, sometimes even unintelligible; while even the most obvious notations of the limits of cultivated land and swamp cannot be depended upon. When one brings the plans to the place under discussion and finds these absurdly incorrect, so far as present conditions go, the chairman and draughtsman alike are far too easily satisfied with such an explanation as that the plan is an office-tracing from the survey of 1860! To make at once this revision of the town-plan for all points at present under consideration, and thereafter as soon as possible for the whole town, is not a matter involving any great delay or trouble, while the result would be an enormous lightening of difficulties and correspondence to local and central governments alike. An amended plan should hang in the Council room, and indeed a copy in every department of the Municipal office. Copies should also be widely diffused through the

* Please see page 29 *infra*.

town, so that school boy and citizen should know the town-plan as well as those officially concerned with it. This small expenditure would be fruitful towards the arousal and diffusion of citizenship, and to the better appreciation of the labours of the Council and its servants towards the public weal.

CONCLUSION.

The regular and spacious lay-out of old Cocanada, due to the Dutch who ruled here until the transfer of 1825, has suffered from that lapse of town-planning which has arisen with, and characterised our industrial greatness, and which increasingly followed upon the railway age. Hence the original fine regularity of broad and avenued streets gradually lapsed, so far as extensions were concerned. This lapse has gone on, until the town's plan now presents the extraordinary feature of having only one single good avenue north and one south—the main road in each case—with subordinate roads running into confusion everywhere. This, in short, is a lapse from a developed town-plan to a simple road-side village growth.

Of recent years town-planning has been returning, but not yet with the old largeness of conception and view. Serious interest, good intention and endeavour are however manifest; and improvement is in the air.

It is important, however, to realise that, despite the length of the preceding report and the variety of town-planning topics it discusses, the main question for Cocanada—that of a general town-plan, designed with special reference to its essential reason of existence and possibilities of development, as a port and commercial city—has not been entered upon. For attempting this a mere flying visit such as the present does not suffice. The problem is, however, ripe for treatment and should be tackled, and this before the approaching railway developments, which the recent purchases of land indicate, have taken form. No source of city deterioration during the past two generations has been more serious than railway-planning without relation to other aspects of the cities concerned.

16A (1)

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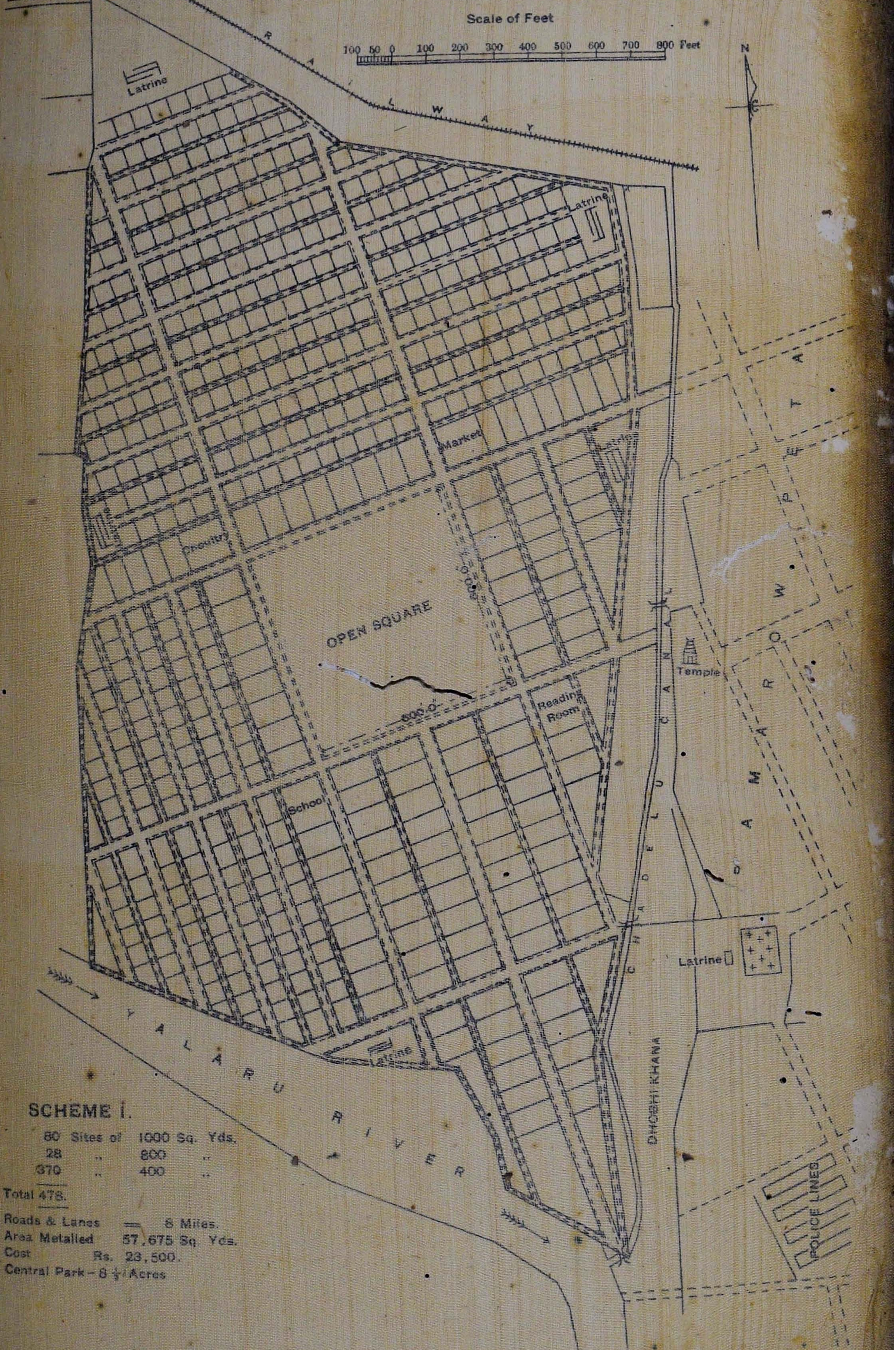
Helio-Zinco., Survey Office, Madras.
1915

ELWIN PETA
COCANADA
(as originally proposed to be laid out by the Municipal Council)



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Helio-Zinco., Survey Office, Madras.
1915

ELWIN PETA
COCANADA
(as suggested by Professor Geddes)

SCHEME II.

[illegible]	Sites of	1800	Sq. Yds.
43	,,	1250	,,
40	,,	800–1100	,,
147	,,	600	,,
56	,,	400	(Huts only)

Total 319. (159 spaces fewer—all of smallest size.)

Roads & Lanes — 4 1/8 Miles. (Saving 10 Acres)
Area Metalled — 38000 Sq. Yds (Do. 19,625.)
Cost Rs. 14.250. (Do. Rs. 9250.)

Park & Open spaces — 12 2/3 Acres.

Reg: No. 1565/2
Copies 300

Helio-Zinco., Survey Office, Madras.
1915

TANJORE.*

Despite an even briefer sojourn than usual, the impression of the beauty of this old city and of the grandeur of its temple will remain among the most vivid experiences of my visit to India. It is seldom that an old metropolis of religion and of State retains so fully the stamp and dignity of both. The fortifications have their best, and enduring use in protecting this historic city from the destruction which has befallen so many others: for now that fortress-cities are growing so few, it is doubly to be hoped that no rash improver will be tempted to substitute the conventional dust-desert of a ring boulevard for the present magnificent girdle of gleaming moat and stately wall.

Yet the malaria difficulty must not be forgotten; and many half-dry puddles at the bottom of the moat are only too plainly in evidence. Still, there is no difficulty in connecting these by a small ditch; so that, instead of many small and dangerous puddles, we shall have only one or two great bodies of deeper water, each less liable to malaria breeding, and far more easily dealt with; while there is also the further advantage of extending the area under cultivation during part of the year.

The great sight of Tanjore is of course its famous temple, of which Fergusson's well-known eulogy is amply merited. More fully perhaps than for any other great monument of India, the harmonious and magnificent unity of this temple corresponds to that of a great European cathedral. In this case too, the main edifice finds an admirable contrast, alike in scale and style, in the small and admirably proportioned and decorated Subrahmanyaswami temple, which answers (and even more successfully) to St. Margaret's Church, which gives scale to Westminster Abbey. The whole is approached by a noble gateway, and enclosed within a cloister of perhaps the most unbroken range which existing architecture has to show. This mutual enhancement of good general planning by architectural and decorative execution fully justifies that hearty admiration which has been expressed by every European visitor.

But when we leave the temple, and enter the poorly designed municipal garden, the lapse of modern taste is plain. Of the historic buildings which must once have filled this area nothing remains save Schwartz's Church, one of the most honourable monuments of Christian missions in India. Outside the gate the Forest Office is fortunate in having appropriate outlook upon a peculiarly noble pepul tree, enclosed within its pial. Here is an old element of town planning which should be reproduced a thousandfold more frequently; for this is plainly of more constant use and pleasure to the public than are the neighbouring acres of half-neglected garden.

Entering the town, a broad and stately car street opens before us; and for good omen a couple of good houses are being built upon a vacant site in the traditional style, each with its outer and inner courtyard. We slowly perambulate the rectangle of car streets, and dive at many points into the minor streets between; and we emerge with (on the whole) an impression of relief, encouragement and hope. For—though here as everywhere there is some congestion, and dirt is not hard to find, indeed many more or less neglected corners—there is no quarter which the movement of civic revivance may not readily improve and sanify, even beautify, instead of destroying.

II

The most congested and insanitary area appears to be that on the south side of the North Main Street, immediately west of the Rajagopalaswami temple: and through this, in the usual way, a new gridiron, of 40 feet streets, has been proposed to be driven. This dreary and conventional plan as usual is quite unsparing to the old homes and their neighbourhood life, and leaves fewer sites and these mostly narrower ones; while the large population thus expelled would, as usual, be driven into creating worse congestion of other quarters, and to no advantage, save of course of the rack-renting interest; for this (often consciously, but sometimes, I am willing to believe, quite unconsciously) is at the bottom of this pretentious but spurious method of "relieving congestion", as it has been practised hitherto in European and in Indian

* For plans please see after page 20.

cities alike. Nor has the offer of suburban sites, ever, anywhere, so far as my knowledge goes, met this difficulty. For even where, as rarely happens, the site offered is one suitable and acceptable to the expelled people, the present cost of building practically excludes them in favour of the more prosperous classes; and hence it is that the result of such would-be improvements, to the poor, is thus, in more than my experience, mainly that of depression; depression increasingly serious, and more than ever difficult to relieve. The very first example of this mode of procedure, the portion selected for beginning upon, is a matter of Rs. 30,000; but the method of conservative surgery, after a few hours' work, brings out the usual results; first, that the new streets are not really required, since ample communications exist already on every side; and, secondly, that the desired additional open space is far more cheaply obtainable by simply enlarging the existing lanes. With the addition to these of vacant lots, and the removal of a few houses, those of the most dilapidated and insanitary character and of the lowest cost, these lanes are greatly improved and every house is brought within reach of fresh air as well as of material sanitation—a point in which the more pretentious method, as its plans show, constantly fails. The total expense for this typical area (including in this case also the (smaller) necessary out-lays on roads and drains) turns out, on official estimate, to be one-sixth of the preceding amount, Rs. 5,000. The same method may of course next be continued south of this area: the whole large extent of the former scheme will thus be better cleansed and sufficiently cleared; while the Rs. 30,000 originally voted for the first instalment will go a very long way towards accomplishing the whole.

So extreme is this contrast between this simple, economical, yet more thorough method of improvement, and the, of late years, customary one of cutting new would-be thoroughfares and would-be sanitary lanes, that I am constantly compelled to wonder and ask how this method, at once so costly and so inefficient, can have become so general as it is, and this alike in India and in Europe. True, to the professed utilitarian the preservation of the old world picturesqueness of these courts and lanes is obviously anathema; rousing all his deep-seated prejudices, and his readily excited sentiments, towards a coldly fanatical iconoclasm of old-world beauty, with the results of which, taking the world and the past century over, the present savagery of war can hardly compare. Yet when we realise that at six to tenfold greater expense than that of the conservative surgery here advocated and set down on plan we have not only less local efficiency, but an increase and intensification of congestion elsewhere, in fact the old difficulty to begin again upon anew, the awakening of the rate-payer is surely at hand.

But for this conservative method long and patient study is required. Nothing can be done in the office with ruler and parallels. The plan can only be sketched out on the spot, after wearying hours of perambulation and often amid sights and odours which neither Brahmin nor Briton, despite the moral and the physical courage of which they are legitimately proud, has often schooled himself to endure. Plans, too, are required for this class of work of a higher degree of detail and accuracy than that hitherto insisted on in municipal or governmental use: so that the recent practical class for engineers, etc., has here been necessary. But even when we have a detailed and corrected plan (instead of the rude tracing from the revenue atlas, necessarily largely out of date) the task is always more or less difficult. Even with a good deal of experience of the game, one is constantly finding oneself in check; now and then so definitely and persistently as to feel tempted, like the impatient chess-player, to sweep his fist through the pieces which stand in his way. This is indeed an old vice of beginners, when otherwise in authority; and their chance of learning of the game is of course spoiled by this abuse of it.

III

We now leave the city and explore the environs to northward. We come to the pleasant sunward and townward site, north of the moat, to find this laid out with long lines of scavengers' dwellings, and these of the smallest (and correspondingly most expensive) type already unfavourably criticised* in other cities. Here peculiarly they show to disadvantage; since permanently spoiling what are plainly among the very finest sites around the whole city, and being set down in such a way as to

* See page 5 supra.

make their old and beautiful piece of garden ground as nearly as possible unutilizable, and in a fair way of becoming the usual desert of weeds and prickly-pears, and with every lurking foulness. Were the simple principles understood, not only that houses must be designed for the sites they have to occupy, but sites planned for rational and productive use, this would have been a hamlet of pleasant and prosperous homes, and an example to the neighbourhood and to the city instead of a warning.

The suburb further to the north shows the benefit of the influence of its temple in its regular planning: and with due care to prevent encroachments, and with the general cleaning up to which I confidently look forward as the civic age returns, this may readily be made a very satisfactory and pleasant quarter. The large and numerous temple and garden tanks of this neighbourhood seem more or less in order; so that it is the more regrettable that almost beside the Victoria Market and the Municipal Hospital there should be a vast and undrained storm-water pool. But this can surely be easily and cheaply dealt with, in view of the watercourse only a couple of hundred yards southwards?

Returning southwards we follow the large East Gate boulevard, which only needs a little attention to remain a magnificent thoroughfare. We pause to admire the excellent old garden of the Town Police Station, which in design is an ornament to the neighbourhood, and in upkeep a credit to the Police. Yet immediately south of this there stand the usual dreary Police Lines of official tradition. We cannot but regret that for lack of a little planning this beautiful garden was not continued and adjusted with the new buildings for the benefit of all the homes and families concerned. The explanation here, as elsewhere, is of course revealed by the very term "*Police Lines*" with its total error of mental vision, borrowed from the image of rows of celibates on parade, with blankness to the real problem and purpose—that concerned with chosen citizens, in their hours of repose, and of providing what should (and might so easily) be made model and exemplary homes.

Further south we come to the Market, which though obviously far from old or outworn, is already congested; especially in front, and with corresponding encroachments beginning upon the public way. Instead however of complaining of the traders, let us rather criticise the imperfect designing of the market (which has been planned with a minimum instead of a maximum of frontage) and endeavour to improve as well as to extend this. Towards this rough suggestions have been given.

We next visit a very crowded and slummy quarter, that of Samanthapalayam Tulukka Street, which abuts upon the main road running from the market to the south-west. Here a poor Muhammadan community is overcrowded around the mosque; and the problem of diminishing congestion, with minimum disturbance and maximum sanitation, has been gone into, with the engineer, upon conservative lines. The provision of some extension for this quarter however is urgent; and the limited improvements at present suggested may correspondingly be carried farther. This re-housing of some of these Muhammadans, in due proximity to their sacred edifice, may perhaps be found upon the vacant ground immediately north of this quarter; for though this has been partially occupied as a cemetery, there seems also some available vacant space.

Coming south again, we reach the S.P.G. Mission with its large ranges of buildings: and to its credit be it noted, that the lay out has been arranged with due regard to the general planning of the town, and with good effect upon the neighbouring streets. The various official buildings and bungalows however to west of this have been erected in the usual piecemeal fashion, and display the customary planless disorder. The best that can be said is that they are less wasteful of ground than usual; but architectural possibilities of grouping or of isolation, of harmony or of contrast, have been little considered.

IV

The main north and south road through this quarter, in fact that from the old town, past the Palace, to the Railway station, requires careful attention, since this seems destined to be permanently the main artery of the town. It should therefore be made the subject of careful study, preservation and improvement; and these from end to end.

Not mere piecemeal improvement. As an example of the latter I cannot condemn too strongly the design shown me for the large vacant triangle opposite the Medical school and a little south of the Clock tower. This design has evidently, as is too commonly the case, been made upon a scrap of tracing cloth in entire detachment from, and forgetfulness of, the situation for which it is intended; but whenever this situation is realised, the present scheme will surely at once be discarded.

The road-fork at this point should be opened out and widened; and upon the remainder of this commanding site a fine public building should be erected. This would be seen from the town itself, and from the Vallam road, as well as by visitors arriving from the station. On what other site in Tanjore could a good building have more effect? Why not for instance a new Municipal Office, the existing one being obviously too small for present uses, much less for future ones? The situation is very suitable for this purpose on grounds of accessibility and general time-saving, no less than of architectural effect. Some minor use will easily be found for the present small Municipal Office and its compound.

V

It is time to pass to the possible suburban extensions. For these, excellent sites are available. First, that upon the large vacant area lying south of the railway station and traversed by the Trichinopoly road. Secondly, that south-west of the great temple; and thirdly, that of the old Nilgiri Garden, north of the great tank and west of the old fort town. The first and third of these sites are specially accessible and convenient: the first named for bungalows, and the other for houses mostly (but not necessarily) smaller.

After due consideration and discussion on each of these spots, sketch plans have been prepared by the City Engineer, in course of his short visit to the Course of Town-Planning at the Engineering College.

We thus leave Tanjore, as we entered it, with great appreciation of this fine old city and confidence in its continued future.

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III

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BELLARY.*

I

The situation of Bellary is a peculiarly striking and impressive one; and much has been made of it. First the old castle and fortress towering upon its rocky height, and with long water-collecting slopes, like those of Gibraltar, varied by picturesquely irregular boulder-masses, among which winds the ascent. Next within the fortress boundary, but practically upon the surrounding plain, stands the old town of Bellary, in which, despite modern transformations, something can still be made out of the original disposition and plan. The deep rain-water tank at the foot of the collecting slope (recalling that of Gibraltar) is here of noteworthy interest, and the question at once arises, for a town evidently poor in water—may not this collection of water from the rock-surfaces even now be somewhat extended and improved?

In front of the dual town, that is to southwards, there extends, as a leading feature of the landscape, the extensive shallow tank of Nalla Cheruvu. This it has at times been proposed to fill up. This filling up of tanks, created by ancient foresight, labour and sacrifice, seems often too lightly suggested. That the edges be regularized, and the slope of the bottom also, so as to avoid the irregular development of stagnant and mosquito-breeding pools and to admit of the steady retreat of the water towards a central and deepest portion—that surely is the more practical policy, and an enormously cheaper one. By thus arranging a pool of retreat, loss by evaporation would be diminished, as well as mosquitoes abated. And if annual drying up prevent keeping up the supply of fish to keep down larvæ, we may efficiently replace fish by ducks, whose incessant searchings in mud and water, on bottom and on the surface are so peculiarly thorough and efficacious; while even if complete drought supervenes, the ducks survive. Is it not part of that curious apathy to minor agricultural interests which is so common among the educated classes, Indian not less than European, that such simple aid against one of the gravest scourges should not be provided and maintained? Will not some temple-trustees take the initiative with their tank? Even to the sending out of duckling colonies—which might be more protected by the sanctity thus acquired from birth, than would be their kindred, of more humble and domestic origin.

There is also a further and more urgent reason for maintaining the great tank. To its east lies what is now-a-days especially called Bellary, the town replacing the old one at the foot of the fortress; and now that this of late years has become gravely plague-infected, the tank is invaluable for the isolation of the western portion of the town which has grown up with the cantonments as their Main Bazaar. The lay-out of the garrison town to the west and that of the official town to the east of the Castle Rock are of more than the usual spaciousness, so that the total extent of Bellary is very considerable indeed.

2. The largest economic resource, of the western town especially, has evidently always been that of military expenditure: and the capital question thus arises and should be pressed for solution as soon as affairs of war may allow. What is to be the future of the garrison? Is it to return here, or not? The matter is of course one to be decided on grounds military and political, grounds of strategic communications, training and health; and cannot turn upon the interest of the town merely; but the citizens may reasonably ask for some speedy decision, clear, positive and fairly permanent. Without this the town lies in uncertainty, which is most disadvantageous to itself, and thus also to the public weal.

Thus the growing abandonment and dilapidation of West Bellary (Cowle Bazaar), while police, road-cleaning, etc. have all to be kept up, inflicts a heavy and growing burden upon the main town; and it seems reasonable that the desire of the citizens for some assistance from the military authorities, some material help with these expenses, in the plight created by the withdrawal of the garrison, should be considered in a sympathetic spirit.

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* For maps please see after page 27.

The situation is rendered still more serious by the growing economic competition of other towns, notably that of Adōni as regards the cotton trade. The cotton-pressing industry does not seem likely to increase; and there is thus urgent need of searching enquiries, alike on the part of citizens, municipality and Government, towards the development of industries which may at least check, if not reverse, the present diminution of the town. The fall of population from practically 50,000 in 1900 to less than 30,000 at present is probably rather under than over stated. Though in the present absurd exaggeration of specialization of studies—as of economics apart from hygiene, and of hygiene apart from economics, obviously related as these must always and everywhere be—plague is too much considered apart from poverty and poverty from plague, there is surely ground for suspecting here that these two are far from unrelated.

II

3. We are now ready to enter upon the more specific changes which the town has been undergoing of recent years. The melancholy but at present inevitable collapse of Cowle Bazaar to the westwards finds here in the eastern town its yet more striking pendant in the present silence and emptiness of large quarters of the town, from which the citizens have been moved into plague encampments. Through the town moreover open long perspectives of thorough-going demolition unparalleled among minor Indian cities, even out of proportion to the large clearances which have been effected in Bombay itself; and comparable rather to the sweeping operations of Haussmann in Paris fifty years ago than to the zeal, excessive though that has often been, of later city improvers. Let any who incline seriously to defend this mode and plan of would-be city improvement look over the illustrated papers of recent months, with photographs of Prussian demolitions in Belgium, and then ask themselves—how comes it that we are also destroying defenceless dwellings and towns, with results so curiously similar?

A ramble through the town—even a glance at the town-plan without going there—is enough to show that not a single one of the three new thoroughfares which have been cut north and south is justified by any need of communications or of commerce. And similarly for the three others running east and west, of which one is already executed, and two are threatened, indeed decided on.

We visit too the vacant site next the great tank, and the large irregular square to the south-east of this, in which "overcrowding" has no less thoroughly been put an end to, and desolation has henceforth reigned. Never in any city of east or west, in proportion to its area and population, have we seen such drastic treatment; and the study of it is thus of the very keenest interest. If this be right, we have plainly here the culmination of a policy for the improvement of cities—or conversely, for the depopulation, which has taken place.

We go in search of the new dwellings which the authors of these extensive clearances no doubt promised to provide; but we fail, completely, to find them. The abandoned ground of a former agricultural college has been planned out (upon a pattern similar to that criticised * for Elwinpet in Cocanada) in large sites for the bungalows of the well-to-do; and the lots are said to be sold, but are not yet occupied. A Brahman builder in this neighbourhood has provided for a dozen or so homes of his own caste, and with a very unusual and satisfactory range of sizes and rentals, but still only for the prosperous; and one or two other beginnings may be found. Still, we are driven to the painful conclusion, that this whole set of clearances represents only a recurrence, indeed with exaggeration, of that worst type of clearance which began two generations ago or thereby in European cities.

The excuse is doubtless that of panic, after the first serious outbreak of plague in Bellary in 1898. But sanitary and governing authorities should be the last to yield to panic.

Moreover their measures must be judged by their success, and ample time has elapsed for this. If after all that has been so often said, of the "reduction of congestion", of the "opening up of congested areas", of the "need of perflation", and so on, be true, it has here been vigorously carried into effect. With what present results?

* For this please see page 6 *supra*.

The town is this very year being again swept with plague, on a scale only too comparable to its earlier horrors. Yet habit, here as everywhere, strangely dulls all concerned. Apparently in reaction from the former excitement and its too active measures, we have now a period of apathy and fatalism, with corresponding practical weakness. For so far from continuing the panacea of demolition, the Corporation authorities who guide us through the vacated streets confess that they no longer so much as attempt to fill up the rat-holes, though this might so obviously and cheaply be done (and that twice over—first when the house is vacated, and again before its occupants are allowed to return). Even the rat-catchers seem to have been dismissed!

Calmly (or, must we not rather say, dully, defeatedly) though every one concerned now seems to look at this plague-stricken town, here are all the essentials of this supreme horror of cities; and for hours we wander, realising Defoe's description of London in 1665, through streets and lanes of closed and silent houses, with the plague-mark upon their doors. The encampments, in their mat-huts, seem now immune: but to what anxious home-coming must they not look forward, since with any season the curse may return? In one afternoon ramble, one has three flea-bites.

How complete then has been the ineffectiveness of these demolitions towards the result they promised! Sanitationists are too seldom economists; and they have here never reckoned that impoverishment of a town which their destructive measures involve. First directly, by the reduction of the total valuation of property, and next indirectly (but even more seriously) by the depression to a lower level of housing, by a new and more serious overcrowding in fresh quarters, of the population they expel from their old homes. Moreover, to these ancestral homes the people of old Indian towns are peculiarly and deeply attached. But the sanitarian has too commonly ignored, I regret to say sometimes even harshly flouted, such "moral and intellectual damages," though history is apt to show the nemesis of their levity.

I refer to the essential literature of plague treatment. It demands rat destruction in the first place; inoculation, as far as possible, and evacuation of houses when inevitable. But nowhere do I find proposals for demolitions such as we have here. From an authority I believe justly reckoned as the very highest I take this frank confession of the failure of an earlier mode of treatment—"the case of Bombay when "the present epidemic first appeared in India. Money then flowed like water in a "convulsive endeavour to abolish the disease. Medical experts, sanitarians and "military organisers were given a full hand by the administration. But it was a "case of the blind leading the blind."

I quote the above with the direct suggestion that these Bellary demolitions, in so far as explained by the plague outbreak of 1906 (and I can discover no other excuse for them) are of similarly mistaken extravagance, and of similar leadership. And I state matters thus harshly, not without regret, nor respect for good intentions, but because of the urgent necessity that such a policy of sweeping clearances, which I see and hear of as being made a precedent for more or less similar ones in other cities, and this even without the excuse of plague, should be recognised for what I believe it is; one of the most disastrous and pernicious blunders in the chequered history of sanitation.

I must go even further: and ask the supporter of these demolitions whether they have not merely been a failure, so far as these may claim that well-intentioned plague measures excused them; but still worse, a possible contributory cause to its present return, extreme as this has been?

Let him imagine the effect of thus drawing the sanitarian foot through the crowded anthill, not simply upon its human ants thrust out, but upon their commensals, the rats, henceforth suddenly also compelled to migration. People and rats alike must thus crowd into already densely populated areas. Must not the starving and the struggling rats, which thus meet in competition, become increasingly liable to the disease? The heaped-up human population is necessarily less able to keep down rats than ever, and it is more careless of fleas than before. For, where her old home is taken away, what joy or effort has a woman in the new and inferior lodgings into which we have consigned her?

May not this clearance-treatment with its starving out of rats from their old quarters, and its consequent over-pressure upon the rat-population of the neighbouring quarters, be yet further an element in the intensification of the virus (a notably variable one, as death-rates show)? And conversely, may not the return of the surviving rats to good condition (along with the re-adjustment of their reduced population to the available subsistence), be a factor in the fading out of the disease? I am aware that all this is speculative; but it is safer to occupy oneself with inquiries of this kind, which are within the medical and sanitary province and competence, than before such reflections, to undertake heroic measures, which end as here.

III

Yet when we look into these new thoroughfares, we find all reference to plague has vanished. Nor has the discussion with regard to them between the local and central authorities been that of general sanitary development, nor of economic development, nor even of the development of communications, as ordinarily understood. It appears mainly to have taken up what can only be described as aesthetic grounds. The Corporation are rebuked for their insuccess in producing perfectly straight thoroughfares along the new clearances, and these of a regular breadth. They plead in reply that they have had to avoid temples and other property too difficult of removal; and that with every appreciation of the beauties of straight thoroughfares, they cannot always afford to demolish a pakka dwelling for the sake of this when a katcha one on the opposite side may be had more cheaply, and at only slight deflection from the straight line. These pleadings seem to me unanswered; save by renewed demands to carry out the thoroughfares with a practically mathematical accuracy. Strangest of all, when the average breadth of the new clearances is well above the standard imposed (with of course correspondingly increased gain to sanitation, perflation and so on) they have been instructed to narrow their roadway, to an average breadth of 34 feet! Nor is practicable guidance given as to the use proposed to be made of the spaces not required on either side of this 34 feet line. In some few cases these are of course large enough for new shops, or even dwellings—supposing any desire these, and are likely to construct them—a circumstance extremely improbable in present conditions, or for a long time to come. In other cases, strips of ground might be given away to the neighbouring properties which are now upon the new thoroughfares; but since these seldom effectively front upon them, but often turn only a gable-side, I cannot imagine that many will be purchased. Indeed were these sold by auction, and new erections to arise in consequence, these would often be so small and narrow as to be insanitary in themselves, as well as a new cause of insanitation to the neighbouring ones,—again shut in behind, and thus deprived of that perflation, which was one of the main pretexts of the whole "improvement."

I deeply regret to write in this uncompromising way of roads which are so evidently made and paved with good intentions; and I have not ventured to do so without hesitation, nor indeed till after prolonged delay and reflection. But in view of past, present and proposed clearances elsewhere, in fact with projects less severe, but too evidently of kindred nature coming up for review in other cities, it is needful to take a distinct stand. Only thus can we urge that such schemes be in future more carefully considered, and their possible defects or failure more clearly foreseen, than has been the case in this unhappy city.

Enough however of criticism: What can now be done? I shall assume that we must face the impossibility for years to come of realising the new and prosperous thoroughfares which were undoubtedly dreamed at the outset of these clearances. The question is thus—how can these gaping slashes across the town be now to some extent healed over, so that their gradual revival and re-occupancy may take place piecemeal, prosperity may slowly return and as individual builders may come forward.

Instead then of any wholesale auction of the frontages, I see no hope save of such piecemeal treatment of them as is indicated above. By all means let any frontage be sold where there is any one to buy it, even if need be, let it be given away to any neighbouring property which can then afford to incorporate it, with construction of a new frontage upon the street. But I do not accept, as at all a good solution

the reduction to straight streets of 34 feet. I recommend simply the planting of trees, in almost complete avenues, by using these irregular spaces, and thus concealing the accidental shapes of neighbouring boundaries.

The straight line is thus given up, but a different aesthetic result is obtained; and I venture to say one more attractive, as well as incomparably cheaper than anything else which can be done with the boundaries as they are. The irregular gables and walls upon these new avenues will thus soon be screened by trees. What may still be seen of them will not be entirely destitute of picturesqueness from the first; and, as proprietors adjust their buildings to utilise these new entrances and outlooks, improvement will go on. This, I venture to submit, is making the best of the situation.

So for the large square cleared of its houses near the great tank. Since there is no longer any demand for new houses in this quarter, the intention of the municipality to preserve this as an open space is doubtless the right one. But since Bellary improvements are nothing if not of aesthetic value, it would be worth while to take a glance at the new centre of the square. Here is a series of concentric circles for flowerpot stands, surmounted by a British cast-metal lamp-post of the cheapest and coarsest trade design, instead of the decent and durable stone post used more appropriately in Bellary as elsewhere for this purpose. Note too the iron-railing, so high and forbidding as effectively to shut out the view of the flowers, if ever they come to be placed there; yet also so weak and ill-made as to have had its points knocked in all directions by the first boy, of normally artistic and critical instincts, who happened to pass by with a stick. Finally, in vivid contrast, rises the splendid pagoda roof in the background, with its gilded finial; for we have in this contrast the epitome of the collapse of Indian taste which has been too common (though I trust not yet universal) in the past fifty years; and of which the turning point seems not yet reached.

IV

Two other east and west clearances are suggested on plan *; but it is something that the municipality should have made the step of considering that one or other of these may suffice. After inspection, repeated some three or four times, of these neighbourhoods (in fact with a detail which, I venture to suspect, has far exceeded that gone into by those who originally suggested them) I definitely advise carrying out neither one nor the other in its present form: since these involve nothing better than the mere continuance and repetition of the destructive clearances I have above so roundly rated.

I am now naturally asked two questions,—first, would you then have let things alone, as they were and still largely are? Second, have you any alternative policy, and if so, what?

Fair questions both: and squarely to be answered. First; if the only choice be that practically given to Bellary, viz., between—

(*a*) things as they are, with all their evils, undeniably neither few nor small, in fact all that death-rates show and

(*b*) these sweepingly destructive clearances by sanitationists as amateur town-planners, repeating the errors of Haussmann in Paris and generally of the municipalities which for the generation after 1860 went on following his example—then (*c*) I believe the whole weight of experience and body of evidence goes to prove that the form of progress was, as in Bellary, from the frying-pan into the fire; from bad to worse. Were this all, or where this is all, I cannot refuse to support the most obscurantist and backward of municipal communities, in their resistance against such improvements—even against my life-long friends and natural allies, the sanitationists! For though I came to this city honestly expecting to support and even bless them, I am compelled, as above shown, to go away in quite another mood and manner of expression.

But now for the second question, that of alternative policy. Not a few Indian cities here offer constructive suggestions and vital example. See to begin with Vizagapatam † and Cocanada ‡, with their new hut villages as well as their pakka

* Stitched after page 27. † For report on this please see page 41 *infra*. ‡ For report on this please see page 1 *supra*.

Extension Schemes. So in the great cities of the north. No city is more careful of its amenities than Lucknow, yet one sees in its environs an extensive and conveniently accessible new village with sites cheaply available for the dispossessed, and with permission, so long as building lines and sanitary conditions are respected, to build pakka or katcha as one's means allow. The effect is no doubt a motley one: but the arrangement is none the less wise; and there are already indications that in time the katcha buildings will be replaced by others on the pakka level, and these new streets will thus gradually rise to the level of the city as a whole.

So much for rebuilding, but what of the actual improvement of insanitary quarters? Are we to leave these untouched?

Not at all. Far from it, we propose to cleanse them, and this with a thoroughness which Haussmann and his imitators have never attempted. Note first that Haussmann was completely and pardonably blind to all the varied multitude of disease microbes which have since revealed themselves to the observant and microscopic eye; so that his demolitions and re-overcrowdings were comparatively excusable, as belonging to the general blindness of his period. But, what shall we say of sanitationists who still expect health results from expending all their available funds upon partial demolitions, now through this quarter, and now that? Are they not culpably blind followers of the blind?

V

Now for the different treatment, really a bacteriological one. It is first of mapping the entire areas of inferior health conditions: and this house by house and lane by lane. Then—instead of spending all one's resources upon a heroic frontal attack for the destruction of some one clamantly overcrowded and fetid area, on a scale proportionately costly, and therefore disproportionately small when all is done, we go along all the thoroughfares and lanes without exception, cleansing, paving, draining, whitewashing as we go. The whole neighbourhood is thus improved and heartened up, and its aggregate valuation is improved, instead of diminished. Its population above all is inspirited, not annoyed, alarmed, embittered or depressed. Note here that this psychological factor is constantly overlooked by those sanitationists whose working theory keeps down their health-consciousness and health-conscience, their health efforts correspondingly to the level of the rectum, and which forgets the regulation of the whole being by the nervous system, above all by the mind and mood, which re-determine health through brain! This factor however works to very different results in different types of city. Thus in Paris Haussmann's clearances became a main factor of social unrest, thus contributing directly (*a*) to the War of 1870, (*b*) to the Commune of 1871. In India, on the other hand, the people are silent, and submit to deteriorative influences meekly, even too meekly: at times however, their quiet protest is manifest, that of simply packing up and going away: and this seems largely to have been the case in Bellary.

Clearly defined then, instead of first cutting new broad streets, through crowded quarters, and then screening the old slums now doubly crowded, by new frontages, our first task is or should be to cleanse the old lanes into their utmost recesses and windings. Of this process the old city of Delhi affords an excellent illustration; and similarly great part of old Lucknow.

The next step is to get light and air into the courts and blocks: but this not by temporary demolitions soon to be built up again between new house-rows; nor as in Bombay and in Europe generally, usually made loftier in front to pay for the changes as far as, may be, and also more crowded behind, and with less space than before now available.

Instead of destroying a long row of inferior properties for a new street, or compelling the whole frontage of an existing narrow street to be set back (if not that opposite as well) our more modest improvement scheme takes only a house here and there for demolition. Quite insignificant changes these will seem; but so much the better; for the funds which upon the Haussmann principle are concentrated upon a single large new street may now suffice for the improvement of a whole quarter, it may

be an entire ward: as assuredly the wealth wasted in these few but drastic clearances of Bellary, applied in this gentler way, would have improved the entire city, and increased its valuation throughout.

This method lends itself better to exposition in the open than on paper; and so it has been demonstrated in some detail to the city representatives who accompanied me, as to the Deputy Sanitary Commissioner, along the very lines of the projected additional clearances above discouraged.

I can imagine no better use of time for those interested in such practical questions than thus to bring those two methods into clear contrast and comparison in town after town; thinking out both alternatives, and comparing their respective expenses and results. And if any reader feel that I have dealt too harshly with the method of local clearances, and be correspondingly dubious of the value of this method of moderate but more diffused improvement, I may here refer him (*a*) to the Town Planning Exhibition, (*b*) to the demonstrations in Madras which have been arranged along with it, (*c*) to the experience and results in European cities which have examples of both methods, *e.g.*, old Edinburgh, in the Successive Improvement Acts of Sir William Chambers and of Sir James Russell and (*d*) to examples from other cities of the Presidency, discussed in other reports of this series.

Of course there is nothing in all this criticism to prevent our making spacious new communications where these turn out to be required, or aesthetic improvements of the utmost dignity. But the problem of Bellary has been stated as essentially a sanitary one: and I recall the sanitationist strictly to this.

VI

One other point remains—that of the central, the supreme problem of sanitation —the improvement of the Water-Supply. As to the particulars of this, I do not venture any suggestion; my visit has been too short: but as to its urgency there can be no doubt: none therefore as to its precedence over any street improvement schemes, even were these of the very best. Water-supply has been from time immemorial a foremost concern of the town-planner.

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1915.

BEZWADA.*

I

The geographical situation of Bezwada is a very favourable one, at the point where a long barrier of hills is cut by the river; thus converging communications from both sides up and down upon this point. It is thus from old time the agricultural capital of its region; and with irrigation and communications, its importance and population have rapidly increased, and may long continue to do so.

The topographical situation is, however, a difficult one. Old Bezwada seems to have arisen along the road (now most encroached on) running north and south to the west of Telegraph Hill: and, as population increased, the little town would spread out fanwise towards the sacred river, but with the limitation of approach to it given by the flood-level upon its bank. The old town is thus mainly the narrow isosceles triangle between the road next Telegraph Hill and that running north and south about the middle of the present bazaar; while between the two is an irregular network of lanes and courts, with considerable old overcrowding, with much more of recent growth. East of this a more orderly network of streets begins to appear, forming a second smaller triangle beside the first, bounded by a road running south-east towards Post office. North of this road a more orderly and modern planning appears in the space between the north end of the old town and the small hill (with bungalows crowning it) to the east. South of this hill and east of old town is the first European quarter, with District Court and Police, missions, churches, convent and schools, travellers' bungalow and club, Municipal office, Post office and Telegraph, etc.

So far then for Central Bezwada, which seems destined to maintain its character, despite all changes and new growths. Its improvement may therefore be considered first of all.

II

Of all improvements that in cleanliness and ordinary sanitation is the simplest and most urgently needed. For Bezwada, as a town essentially of peasant origins, exhibits in the most extreme degree that indifference to the disposal of manure and dirt which is wasteful and regrettable in the farm-yard, but abominable and poisonous in the town. I would suggest that the Sanitary staff of Bezwada, the Sanitary Inspectors especially, be encouraged to visit Cocanada †, with their colleagues there for guides; since there a much higher standard, that of a maritime town and with Dutch traditions, is maintained, and being advanced.

Further I may refer to the "Inspection notes" of February 1914 of Dr. Matthew as covering the field of immediate sanitary endeavour very satisfactorily; and with clear definite recommendations, in which I heartily concur. This document should in fact be widely circulated, not only among members and staff of the municipality, but throughout the various classes of the community. The development of their "Health Conscience" would thus be appreciably advanced.

III

I now come to improvements of housing and town-planning which are urgently required. Congestion is manifest, especially in the central bazaar quarter and on the hill side. The expansion of the town to the north, over the entire available vacant area, *i.e.*, not only up to the forest, but including this, is now urgently necessary, and a town-planning scheme for this area should now be prepared and set actively agoing. Islampet and Wynchpet express successive waves of improvement; as indeed also do various smaller beginnings. But the neighbourhood has largely fallen into a squalid condition, repelling further settlement; and the problems presented by the groups of untouchables, by the unpleasant puddles of the old tank, etc., would need to be vigorously dealt with; as also that of the extraordinarily careless and dirty disposal of town rubbish at the north end of the forest. There is, however, no serious expense in any of these preliminary improvements; and there are sufficient good houses of various sizes in the neighbourhood to encourage building of the same kinds.

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* For plan please see after page 36 *infra*.

† Please see page 15 *supra*.

One obvious reason of arrest of growth remains, that of the formidable radiation of heat between the hills on either side. That of the bungalows on the east is comparatively clothed with trees, and the fine patch of trees at the southern temple of Telegraph Hill shows what might and should be done elsewhere. Beginning with the "Colmatage" of the ravines, afforestation might next be extended over these hills, with enormous gain to the comfort and health of the community and reward to its expansion.

The housing of dispossessed people, and of the normal growth of population also, is possible to some extent west of Telegraph Hill but must more largely be made eastwards; and to these districts we shall come later.

Returning to the improvement of Central Bezwada the problem of the two main north and south thoroughfares first suggests itself. The older and more westerly, as already remarked, becomes increasingly narrowed, by old encroachments, as it approaches the river. But towards this end substantial help is coming from the widening, for a couple of hundred yards or thereby, of the present westmost lane of the town (parallel to this main road) thanks to the strip of land conceded by the Public Works yard running north and south beside this, thus widening one of the east and west lanes beside the temple at the north-east end of this Public Works Department yard. This widened street would thus easily admit of the deflection into this of the main stream of wheeled traffic towards the river, leaving the present line of Brahmin street more direct for wayfarers.

The broader North and South Bazaar street may be easily widened a little as opportunity arises at one or two of its more constricted points, north of where it crosses Hanumakondavari street; but south of this it has been too much encroached upon throughout its length to be now enlarged with economy. The above named street which crosses this one, and is broader, affords a passable thoroughfare to join the new Public Works Department widening to the west, and thus the river view. Starting from the same main crossing towards the south-east the somewhat narrow but straight and improvable thoroughfare of Fakir Tekka street is easily reached, with its direct access to District Court and Post office.

IV

Returning once more to the densely crowded centre of the old town, what further improvements are necessary? The best line has been already agreed upon, and surveyed, that running north and south nearly midway between Brahmin street and Bazaar street. I have not of course had time to study this and the other proposed improvements of this quarter in detail, though they would well reward this: but in general terms I concur with the views expressed and projects pointed out to me by the Chairman and Dr. Matthew. The only further suggestion I need make is that an old congested quarter like this may be helped more effectively (*a*) by taking out an occasional building, so as to yield an internal air space, tree-space or even garden court, or (*b*) by widening here and there into a small square or rectangle, than by the far costlier process of widening uniformly throughout. Such little squares may with advantage open here and there from the present bazaar network, in which there is evidently a shop famine, as is evidenced by the rise of rents of recent years, which far exceeds that of normal progress, and is a hardship to shopkeepers and their public, with doubtfully desirable gain even to the proprietors. The new squares, if I may so continue to speak of what are merely slightly widened portions of old side streets or occasional widenings of main ones, would far more easily be well built if their value were thus increased, and space then given for shop below and house above. In other cases too, a good house without shop might be constructed by an owner attached to his ancestral home—a sentiment which cannot be too much respected by the considerate town planner or improving municipal committee, even though it cannot always be possible completely to yield to it. But when removal is inevitable it should be aided whenever possible, not merely by the costly lubricant of compensation, but by offered transfer to some new site capable of acquiring traditional family associations and value in its turn. There are already too many beginnings in Indian cities (I do not think particularly in Bezwada) of a western recklessness of removal and of dull monotony of renewal which are fatal to home and family sentiment, and thus disastrous to citizenship and to the

city; and it may be described as a main object of recent good town planning and housing so to plan and build that the local sentiment and even conservatism of the Indian home and its quarter, which has also been characteristic of European cities in their best days, may increasingly be recovered and maintained. For what is a period of civic change, with its inevitable burial of something (often too much) of the past, but a fresh opportunity—that of re-establishing anew for our successors the conditions of that ancestral pride and piety which we have felt for our own civic heritage? It is the outrage of this feeling in Belgian cities which has made their destruction a grief and a cause of indignant protest to humanity at large. But while we can all realise the destruction of an ancient monument we are only too apt to forget how kindred associations cling to old landmarks of little interest or beauty to us who pass by.

I am aware that to the busy improver, naturally impatient of sentimental delays, this expression of sympathy, and still more the policy of patience and of conservatism which it implies (and even urges) may seem at first sight obstructive. It would fain even be destructive of the dreary and monotonous net-work plan, to which he is too apt to sacrifice all that the constituents and clients for whose interests he supposes himself acting most value, but which are for him obscured by the material confusion and dirt he rightly longs to remove. But it is better for him to hasten slowly to consider and revise his plans anew, and these for de-congestion and for rebuilding alike. In face of the present excessive conservatism of the old Indian town, the authoritative and sweeping reforms to which he now so often inclines contain new dangers he in his turn has to be awakened to, first that of "throwing out the baby with the bath" or of destroying the old embroidery in its cleansing; next of replacing this ancient and complex web by the crude and mechanical pattern imposed by the industrial age upon the American Commercial town, or by the early British sanitary bye-laws (of about 1858) which have made most of our modern sanitary industrial quarters, with all their sweeping and regulating and standardising, the home of a mental depression, a moral isolation, a dreary dullness, which are probably of a far more serious destructiveness to the community than were even the material diseases which such bye-law construction has abated, great though its services in this respect have been.

This is not a criticism of the proposed treatment of central Bezwada. On the contrary it is a defence of the policy of moderation to which its proposed improvements belong. It is a defence of that principle of reconciling the appreciation of the past and the consideration of existing interests, with the due claims of the sanitary measures which are so urgently required, as of those of locomotion and of commerce. How then shall we effect the real (and the economical) improvement of these old quarters, with the excessive and timid conservatism now everywhere menaced by a no less excessive because rash and ill-considered radicalism? Plainly by finding the right compromise—that of conservative surgery. Even this cannot but be painful, and at hopelessly diseased or decayed points even drastic; while always as antiseptic as the sanitary reformer can desire. An old city should thus be treated like an old and venerable tree, which, after such sharp yet careful and even reverent treatment, at once retains its character, and renews its growth.

I assume then that these principles may be maintained, and old Bezwada thus escape that infection of crude town-planning which appears to be threatening too many of its sister cities, and against which they cannot too strongly be cautioned and guarded.

The right spirit, of conservative-surgery, has presided over a plan sketched out by Mr. Roberts * for the improvement of the access to the modern quarter, that leading from the old town and the Police offices by Municipal office and Post office to the Telegraph office. Its widening of roads and rounding of corners are excellent and when viewed by approaching from the old town with its narrow thoroughfares it may well seem sufficient. But when we approach this important quarter from the other side, of the growing eastern portion of the city, in fact from new Bezwada, as we may call it, these thoroughfares, even when widened, will still be too small? For here is the centre of the whole city's net work and by this narrow central route like that of wasp's waist or hour-glass middle, the most essential circulation of the whole city must increasingly pass. I therefore suggest a retracing, in which the

* Executive Engineer, Central division, Kistna district.

proposed widenings and roundings are increased, with formation of a small Post Office Place; and I am convinced that on reconsideration, especially by approach from the east ward these moderately enlarged demands will not be thought to be of any excessive provision for the Charing Cross of so rapidly growing a city.

V

In view of the growth of business, and of that habit of business to abide by its old centre of which London "City" is but the most familiar and important case, how is the extension of the commercial offices and godowns, to be provided for, and this without checking the needed expansion of the Bazaar quarter, already so cramped? The needed solution is afforded by the utilization of the Canal Bridge, which crosses the canal quite at the best position for it, about the middle of old Bezwada, and lands us in what we may at once conveniently begin to distinguish as South Bezwada. It is difficult to understand why this expansion has not long ago begun; but there certainly seems no reason why it need be any longer delayed. The Canal Bank west of the bridge is occupied by the Public Works Department, with old and new bungalows, etc., but east of this Canal bridge for the best part of a furlong up to the Railway bridge, there is as fine a site as one can see in Amsterdam, with the same beauty of canal and river view in one; and with the advantage, so important in this climate, of shady northern aspect for the street and its principal office rooms alike.

The acquisition and development of this site, surely the best alike for business situation and for amenity obtainable in the entire city, would give that impulse to city improvement which is so desirable. Conversely the check to it which may so readily come from careless and sordid building, or by crude and extravagant architecture, is no less to be guarded against. But it should not be very difficult to find an individual or a group in Bezwada able and willing to give this important scheme due consideration and preparation, and to obtain a suitable architectural design accordingly.

This improvement, moreover, leads obviously towards a more extensive one, that of filling up the large triangular area, of about 12 acres lying behind this new canal frontage, and enclosed by the river wall and the railway bridge embankment to west and east respectively. This scheme has of course long and often been talked of, but has surely now ripened towards execution. I leave to Mr. Roberts' technical knowledge and skill the task of reporting as to the methods and expenses of this undertaking; but there seems no reason that the pumping of sand from the river need be either dangerous or expensive. The work can be carried out in two or three seasons and with no great outlay, while the consolidation of sand does not require that prolonged delay before building which is essential where mud is the material available. The present cart-stand would thus speedily find as good a site further south, *i.e.*, in the north-west angle of this large triangle, and the balance of its area would become available for building purposes. The lay-out is fairly obvious: behind the new quay fronting the canal would arise minor business streets, behind these again streets and squares, dwellings for clerks and for labourers, while overlooking the esplanade with its fine river, its sunset magnificence, a (fairly close) row of pleasant bungalows would naturally arise. The land has at present no value to speak of; and the expense of filling up, though for the considerable depth of 15 or more feet required, should thus be safely recovered.

Yet even all this is but the western half of the future south Bezwada. The canal bank admits of the construction of a spacious roadway under the railway line, here fortunately and permanently single; and the fine northward boulevard above predicted may thus be continued eastwards along the canal bank, and in fact indefinitely; the more since the bridging of this canal at due intervals has already been under consideration between Municipality and Government. The filling up of an easterly section of the low-lying ground between the canal bank and the river wall is an easier matter than that of the preceding one, since the depth required to be added is here much less; and this development too may be extended indefinitely eastwards. Before this raising the utilisation of the pleasant riverward slope for garden purposes will doubtless proceed below the present (inconsiderable) beginnings.

27

VI

The importance of the river front for bathing purposes would thus be increased, no inconsiderable matter, either for the development of residences, the daily needs of the citizens, and the attraction of pilgrims. For this old cult of river-bathing is no dying cult; but on the contrary needs but due appreciation, with corresponding regulation and planning to create here a veritable second to Muttra and Benares themselves, and even to extend its blessings to the children of other faiths. From the west we bring an experimental familiarity with that invigoration of body and mind which goes with the bath; and this above all in nature more than in the dwelling; why then need we fail to recover from this ancient yet living East, that sense of deeper purification, of higher resolutions, with which our own tradition, from sacred literature to modern poetry, is already so rich and full?

The due development of this magnificent river front with its ancient and sacred associations, may thus afford the best of outlets for the active citizenship of the Brahmin community.

VII

At this point also, and in this connection, we may note that another direction of development of the city lies up-stream, west of Telegraph Hill. The present road is steep and inconvenient and its lowering through hard rock would not be without expense, though this partly returned by utilisation of the material. The wall of the Public Works Department would have to be rebuilt, unless indeed it can be arranged that a sufficiently unclimbable railing replace it? In that case, the fine river view the present wall shuts out may be recovered.

The somewhat dilapidated villages of this neighbourhood and near the hill, present no serious difficulty as regards improvements; and the increasing interest of the leaders of Brahmin opinion in the condition of the lower castes and the depressed classes may here find useful and reconstructive field. Between this high ground and the flood-swept fields next the river, the inner embankment by the roadside affords protection to an ample acreage, suitable let us say, for an ideal Brahmin garden village suburb, and for other garden villages beyond.

In course of this study of city extensions reasonably to be expected, the development of a tramway system naturally suggests itself: and its alternative routes and possibilities should be worked out on draft plans, and fully considered. It is too often the custom to say " wait until the suburbs grow "; but this caution is apt to be too narrow and timid; the bolder policy, that of pushing out the tramway into the proposed suburbs, is the way to make them grow.

VIII

It is now time to discuss the future of the eastern portions of the existing and expanding town (which have of course been visited in considerable detail, before entering upon the present report upon the western portion).

First of all we come to the railway. And with every appreciation of its importance to the city's past growth, present activity and possible future, it is impossible not to express the extremest regret for the way in which the expansion and development have been conducted. Apparently, as results show, from its own immediate requirements only, and without any adequate infusion of modern town-planning methods, even for its own purposes; and still more obviously, without consideration of the requirements and convenience of the town, much less the damaged amenities which go with it the extreme interruption (one must say all but destruction) of its communications. From Aberdeen to Moscow, from New York to San Francisco, the above criticisms have to be made of railway planning. This more or less everywhere recalls, repeats, exaggerates, the careless progress of the caravan, and even the devastation of its conquests; and though improvement has begun, it still seeks too much hastily to exploit for immediate profit rather than wisely develop for progress. Yet this first elemental phase of railway history—that of route-extension and immediate aggrandisement, inconsiderate of the land-injury, the village damage, and the town spoiling which its unskilled planning has almost everywhere inflicted upon its passage and during its expansion—is happily now coming to an end; and the higher

elements, which have also throughout history come to the front amid all the extensions and conquests of the caravaniers—in fact their statesmanlike, social, and even moral qualities, are increasingly appearing among their modern representatives. Even a more enlightened self-interest begins to realise the past mischiefs done, and to regret them; and from this again the step is inevitable, to be ready to meet the communities which have been and are suffering from their inroads, and to consider how far better planning may even now mitigate the damage done, and this with economy and mutual advantage to all parties concerned.

Let us grant from the city's point of view that the main line of route is the right and necessary one, and at any rate that it is permanently fixed; and further that the three level crossings originally provided were the best that could be given at the time of making the railway, whose present vast expansion was unforeseen. But the main south crossing is nowadays far too often closed, and its opening too tardy for public needs, while the middle crossing has been almost obliterated and the northward is dangerously spoiled. Beyond this the further needs of the extending town seem not at all to have been provided for. The offer of an over-crossing in the middle, but as a mere foot-bridge, is obviously quite inadequate for the city's requirements; while a large over-bridge with its long ramps on either side would be expensive and inconvenient to all concerned. Here then the solution seems to be to supply an under-bridge, for which there seems no serious difficulty at all of sufficient head-room for ordinary purposes, nor yet of drainage or lighting. Probably the present northern crossing may before long require the same treatment: while as already pointed out, the requirements of the future, further northward still, should now be planned out and agreed on between municipality and railway; for though execution may be deferred until actual need, foresight design can never safely be delayed.

Yet before entering upon this a further criticism of the railway and associated arrangements should be made: (1) that of the comparatively recent extension of large sidings almost up to the very bank of the Ellore canal and (2) the placing of the oil tanks of the various companies immediately behind this. It is these extensions which further cramp and limit the old town by crushing and defacing its vital link with the new: and their removal for the town's sake, should seriously be urged, persistently pressed, and negotiated for. But to maintain these although their removal be temporarily inconvenient, cannot really be sustained by the Railway Company as truly in its own best interests; for since the present east expansion has taken place in recent years, much more than the present area can possibly now supply will before long be required. Surely then the better policy for all concerned is to remove the more easterly of these sidings, and slightly to shorten such as may remain indispensable. This can be effected by utilisation of the extensive railway property to the north of Bezwada station, and on space at present more than ample, and indefinitely extensible as need may arise. With these the oil tanks should of course go northward, or rather north-eastwards. For the whole question of the city's relation to the railway system should now be considered.

To begin with, we may note the position of the single factory lying between the railway and the Ellore Canal, and close by the bank of the latter. This is plainly the right position for factory development; and the planning of this whole area towards these purposes and these only, excluding even industrial dwellings, should now be amicably gone into by all parties concerned: *i.e.*, Railway, Canal, Municipality and Factory-owners. The proposed removal of the rice-mills from old Bezwada should obviously be to this site; for here and here only can be found the requisite position of most economical working with due provision of railway sidings on one side and of canal wharf on the other; and with adequate roads between and to all parts of town alike (for I assume the improvement of the present old crossings, whether by under-bridge or otherwise). The advantages to old Bezwada from this removal are obvious, while the ready utilisation of the present mill-premises as stores, etc., would protect the present owners from loss. Their inconvenience and loss of time during removal would at once be compensated by the many advantages and economies of new and better premises, and these in a situation of convenience which would give their industry no small advantage over their less conveniently placed rivals elsewhere.

The gain to the town from having this dusty industry with its unpleasant waste-product of ashes, dirty, gritty and unwholesome sent to windward is again obvious, and the removal of this stuff by railway or canal is easy; while its possible utilization for brick-making, for manure, etc., may also here be far more practicable than in town. The chemical analysis, in this land of waste and deficient manure, has therefore been arranged for.

This removal of the factories would carry with it as an early consequence, the decongestion of the town. The factories would still be within easy walking distance, so that no hardship to workers would be inflicted; but gradually a demand for nearer dwellings would arise.

For these an admirable situation has long been waiting. The plan of Arundelpet, with its two public buildings and its convenient roads and bridges, the whole lying between the avenues of the banks of the two canals which enclose it, shows that foresight and town-planning have not here been lacking. But the plan needs amendment; it has the defects of its period, of apparently utilitarian design, whose monotonous and unattractive respectability disguises a prodigal wastefulness, for unnecessary length and multitude of roads. But half this length may be dispensed with, and the economy devoted partly to making this area all that a garden suburb can desire, and partly towards such future extensions as may be necessary. In this fine situation may and should be constructed a suburb which would not only be one of the best features and influences of the city, but an example to others, especially in the canal area; for here may we not reasonably hope to see united the advantage of the working life in good conditions, worthy of Holland and of India, at their best? Just as north of the Ellore canal no further dwellings should be constructed (save of course those required by the railway for its own purposes, and upon its own ground), so south of this canal no factories should be allowed. The improvement of Ellore Road, and the planning of the vacant sites and fields to eastwards of the extending town, should also now be fully considered. The Government quarter south of Buckinghampet Road, with its spacious Cantonment type of planning need, here hardly be considered in detail; but the closer lay-out inevitable for most of the fields to north of this need not exclude the provision of pleasant and attractive bungalows easily reached by the spacious thoroughfare. The large number of clerks employed in the various Government offices may also suggest housing supply at various standards of income; while the needs of peons and servants generally should not be forgotten; and this upon an improved scale, not the deteriorated and crowded one of which there are such unfortunate examples in larger cities. Instead however of here following their bad example, it is not a little desirable, and even socially urgent, to set a conspicuously better one which increased health, happiness and resultant efficiency will soon be found to justify. It is interesting here to note that one of the most distinguished architects of India authorises me to say that his own improvements upon his servants' dwellings, though upon a scale of space and of comfort (*e.g.*, including electric light) thought prodigal by his neighbours, have thus richly repaid him.

The problems of rebuilding in detail, and this for different classes, have been discussed more fully as regards Vizagapatam * and Cocanada †, so that here little need be said save to repeat as essential sources of the creation of house-wealth, which a too mechanical method of town-planning and of sanitary regulation tends to repress, if not even to suppress beyond recall—first the constructive ability of the poorest people, and this of wife as well as man; and secondly the persistence of real constructive artistic tradition and faculty in the craftsmen of the town. Not but these have their defects and limitations, but all are capable of being corrected. These are the sources of cutcha and pakka construction, and each at their best: whereas the system of too strictly imposing pakka construction upon those who cannot afford it results in the limitation of their indoor space. A too mechanically regular and sanitary planning tends to remove their most useful outdoor space also, that of backyard large enough to be cultivable into garden; whereas with better planning and simpler construction, space can be given, both outside and in. If one other point may be insisted upon, it is that, here in Bezwada, at this outset of a new period of expansion, the time is ripe for the arousal of each and every caste group, with its vast resources of moral

* For the report on this please see page 41 *infra*. † For the report on this please see page 1 *supra*.

and material co-operation, and this at each and every level, from the Brahmans by their sacred river to the sweepers at their humble but useful and healthful task—holy therefore also in its way.

So far then this general survey of Bezwada and its possibilities. In summary we have advocated—

a heightened standard of cleanliness, and this primarily by improved inspection, etc., but fundamentally by advancing public opinion, which can be helped on in this civic respect just as in matters imperial. And as the vast activities of the war have thus educated the public upon its larger plane, so a vigorous policy of constructive civics actually is found similarly everywhere to arouse interest upon these local levels, which moreover add up, like "local actions" in the military sense, into larger and larger issues. Beyond this fundamental cleaning-up, this arousal of health-conscience, this renewal of Diwali, comes the question of housing the poorer classes; and in this of enlisting, eliciting, guiding their own constructive powers, and into conditions of marked and unmistakable advance upon their present condition.

Congestion thus reduced, the improvement of the communications, housing and bazaar accommodation of the old town has been urged, and detailed improvements have been discussed in typical cases.

The expansion of the old town business quarters, primarily to the opposite bank of the canal has been advocated, and this as a beginning of an extending South Bezwada, with reclamation as required.

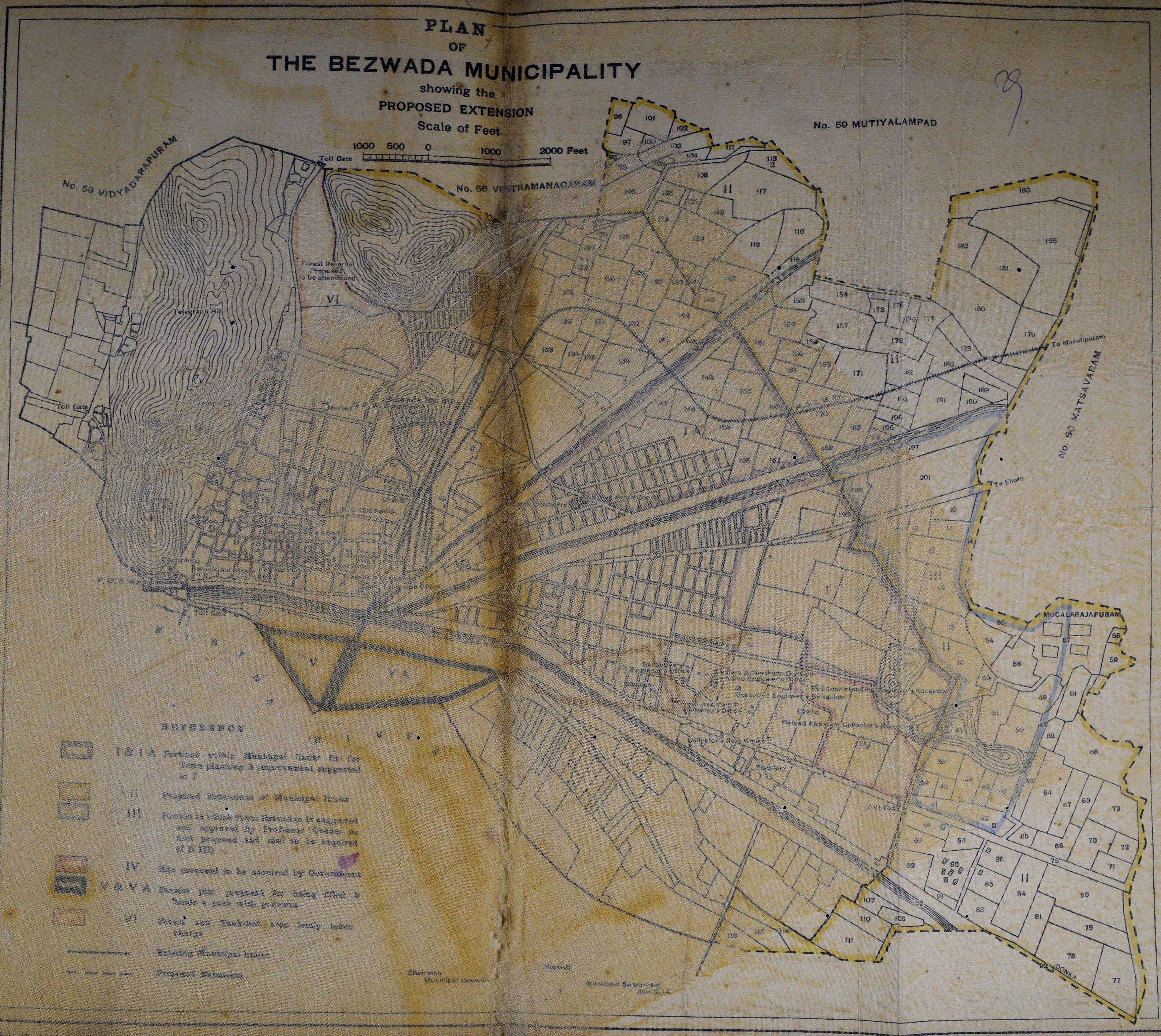
The improvement of communications with the eastern half of the town, across the railway has been pled for, and the removal northward of its southern sidings and oil tanks. The removal of the factories to north is recommended, with due railway and canal facilities, and with the development of the fine area of north Arundelpet as a workers' garden village.

The development of Buckinghampet eastward has also been recommended, so completing for our period the expansion of the city on this side.

Finally, in course of the Practical class held at the recent Town Planning Exhibition the drafting of some of these extension plans has been begun by the City Surveyor.

It remains only to thank Mr. Hanumanta Rao, Municipal Chairman, and his colleagues, for their kind help and guidance in that necessarily rapid study of the town in all directions on which this report is based; as also to express real obligations to Mr. Roberts *, Public Works Department, and Mr. Fotheringham, Sub-Collector.

* Executive Engineer, Central division, Kistna district.



Reg. No. 1565

Helio-Zinco., Survey Office, Madras.

CONJEEVERAM.*

At the very close of my work and stay in this Presidency, I have been privileged to visit this city; and I cannot readily express the pleasure with which I find already realised here—and since an indefinitely remote past—most, if not all, of the proposals I have been making for other cities in the opening future. For here is not simply a city made monumental by great temples, and rich and varied by innumerable minor ones; what rejoices me is to find (*a*) the realization of an exceptionally well-grouped and comprehensive town-plan, and this upon a scale of spacious dignity, combined with individual and artistic freedom, to which I cannot name any equally surviving parallel, whether in India or elsewhere; and (*b*) the correspondingly high level of housing, and of well-being of the town generally. The culture-cities of Europe have monuments and aspects still more delightful to my western eye. But from St. Andrews to Durham, Lincoln to York, Oxford to Salisbury, Bruges to Malines, Aix-la-Chapelle to Cologne and Freiburg, Rouen to Nimes, one finds too readily that contrast of deterioration, even to slum and squalor, which is comparatively absent here. Too often in such cities one also finds corresponding social and personal deterioration as well; but if this exists here, as at points it doubtless may, it has escaped me. My stay has been short, and my scrutiny correspondingly far from exhaustive; but I was fortunate in being guided and accompanied by the chairman and the sanitary inspector as well as by several leading citizens: I have pressed them to show me the very poorest and worst parts of the town; and I have been taken to one after another of what they describe as these. Poverty, of course, there is—especially among the weavers, who are here as everywhere depressed, but by general economic causes—but this poverty is in a form endurable, compared with that of too many other towns. Of slums, in the ordinarily frightful sense, there appear to be practically none, and of dilapidation very little. Not only are the main thoroughfares magnificent in their avenued spaciousness, and substantial and pleasing in their buildings, but the minor streets would often be considered first-class ones in other towns; while of badly congested areas, so familiar elsewhere, I have failed to find any. I am the more compelled to accept the favourable assurances of my hosts by the fact that of the five or six plans, mostly of small sanitary lanes, and other minor improvements, which were shown me as all the changes at present in progress, or urgently required, I was able at once to accept each and every one, and to approve them: and with only a single suggestion—that of economising the demolition of a gable by a slight narrowing of the lane, I think from 10 feet to 9 feet or thereby. Here is a result widely different from my experiences of other cities, and my criticisms of their plans; and this I interpret as fuller evidence of the positively as well as relatively good condition of the town.

II

The town-plan well rewards study; that of Big Conjeeveram especially. For here the problem of the two great temples and their surrounding car streets and quarters has presented an exceptional difficulty, which every town-planner will appreciate: that of co-adjusting quarters governed respectively by the two contrasted systems of orientation which the temples of god and goddess respectively require and impose: for while the god's temple is placed by the cardinal points, that of the goddess must lie diagonally between them. The regularity, yet free and flowing originality, with which this adjustment has been accomplished, with the resultant beauty and variety it affords, makes this one of the best object-lessons in street-planning to which I can point in India. Outside the large rectangular area (of Siva-Kanchi) thus formed, regularity of planning deteriorates, as usual in most towns, but does not so wholly break down. The junction with the southern suburb beyond the Car street is well managed without lapsing into disorder in the way so common elsewhere; but continues past the modern public buildings and schools, and through Hodgsonpeta to Little Conjeeveram.

* For map please see after page 39 *infra*.

Is the city then perfect? I do not of course say or think that; but to suggest improvements worthy of the vacant sites remaining would be a matter which no planner would undertake without much consideration, and real appreciation of the privilege of contributing his endeavour to so excellent an existing whole. He would enquire more fully into the circumstances which have preserved Conjeeveram from the deterioration so sadly manifest in religious cities generally; and he would thus be involved in enquiries into matters of religion and ethics, education and art, yet of industry and economics also. He will be wise if he do not insist too strongly on introducing elements which do not as yet exist, desirable though some of these may be: primarily he will seek to maintain, and then enhance, existing advantages, and thus help this old city to carry on its antique past into the opening future, without falling into the squalor of that lower industrialism from which sister cities have suffered, but from which there are grounds for hoping that Conjeeveram may escape.

A very distinct sign of hope in this direction is the little Co-operative Factory of weavers in Big Conjeeveram; with its simple and admirably planned building, and the evident spirit of energy and mutual good will which pervades its use. The association of a school with this is also encouraging.

A short visit to one or two other schools, notably that for girls, gave a further evidence of that wise co-ordination of respect for the traditions of the past with provision for the opening future, in which the future of more than Conjeeveram lies.

III

The water-supply I understand to be excellent; and the natural drainage is also good enough to suggest the hope that no too costly and elaborately complete system of underground drainage may be necessary. Storm water channels no doubt require attention here as everywhere, and may doubtless admit of further improvement; but for absorbing ordinary drainage gardens seem common, and the increase of this natural and normal sanitation may be hoped for. I found at one point (of which unfortunately the name and exact position have escaped me) that the ordinary work of surface drainage was being arrested by (a surely too strict interpretation of) an order from Government not to proceed with drainage repairs or improvements, until the planning of the general system was matured.

I must here mention, with peculiar approval, the practical way of dealing with drainage which I observed at least at two points, and which I believe to be capable of imitation, and this at a thousand points throughout the cities of India: not simply the guiding of drainage (of course not in the undue quantity of a sewage farm) into a garden, but actually the formation of new gardens, for the express purpose of receiving such impure waters, and thus converting what would have been in each case a fetid and poisonous nuisance into a scene of order and beauty.

IV

As over this old and sacred city, so beautiful and prosperous, there hangs the dread of possible deterioration, as in too many other cities around, so there is, if not a constant menace, at any rate a latent danger, on the strictly material side. For with a city lying below river-beds, and these constantly rising, perpetual vigilance must be necessary; there is yearly, and even increasing, danger. Efficient though dams, protective bunds and dykes have proved themselves so long to be, there is always the possibility of exceptional floods; and the consequences which might arise from even a smallest breach in one of these would be serious.

What exact provision exists, comparable for instance to that of the "Ministry of Water-state" in Holland; *i.e.*, for the periodic inspection, the maintenance and repair, the heightening and strengthening of these unresting defences against the tremendous destructiveness of swollen rivers? When even the steady and sluggish little Ouse has burst its ancient and well-tended banks this very winter, and has spread flood over 30,000 acres, this question will not, it is hoped, be deemed an impertinent or inappreciative one.

V

Of the many temples, which are the main glory of Conjeeveram, only a single word may here be said. An enquiry must be permitted as to the Kailasanatha Temple, which is protected under the Ancient Monuments Act, but which has also—surely before this protection?—been the victim of what I must deliberately describe as the very worst "restoration" which I have ever seen in any part of the world. The old stones have been weathered, in many cases I daresay almost weathered away; but even in this state their general impression is striking and venerable. But in the midst of these stand huge pieces of restoration, in stark and glaring whiteness, itself ghastly and repellant, notably the crudest and yet most mechanical reconstruction of the ancient bull, and of a number of the rampant lions. At a distance these appear to be new constructions altogether, but on closer approach one finds that a new cement surface has been plastered over the ancient figures; thus caricaturing them in the worst possible way, at once in mechanical copyism and total failure: hideous exceedingly, yet not terrifying; contemptible, mean and monotonous throughout. It is not enough that such restoration seems to have been stopped. The question must be asked—can it not be removed, even chipped away? Or failing that disguised by verdure—of course kept under control?

And are such things still being done in India?

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Helio-Zinco., Survey Office, Madras.
1915

VIZAGAPATAM.*

Our first visit, with the Deputy Sanitary Commissioner Dr. Matthew (through all these inspections a valued and helpful colleague), was conducted by the President and Secretary of the Municipality, and the Deputy Collector, with the assistance of the City Surveyor and Engineer, to *Maharanipeta.* This was originally planned as a new road for pakka cottages and small bungalows, but it has been modified by settlement of weavers from a lower part of the town injured by the recent flood. Their new huts are in progress, being built, generally, it appears, by their future occupiers themselves, as larger spaces (lots 24 feet × 30 feet) than those of their flooded houses; and I doubt not they are justly described as decidedly improved in other ways.

Here is an excellent illustration of that house-building habit and efficiency, which is traditional all over India, as of old, in Europe; and it is most satisfactory to see this encouraged here by the municipal authorities, instead of suppressed, as is too frequently the case, by the external supply of the more expensive but really inferior dwellings, from cooly lines to chawls, which are becoming so regrettably common in greater cities. These are indeed dangerously near being taken as standard types, to be established by central authorities and accepted by local ones!

The placing of a poor working population upon this excellent and healthy site, at first laid out for the more prosperous classes, and this with space between huts, and regard for family independence, is still unusual, so far as my experience goes: and I desire warmly to congratulate all concerned upon thus having provided for the health and happiness of a greater number of their fellow-citizens than they had originally planned for.

It is satisfactory also to note that by encouraging the people to build their own houses, the capital outlay for housing, which is necessarily so considerable, even where accommodation is inadequate, has here been avoided, with economy to all concerned. With an outlay averaging about Rs. 100 per house, a more spacious and more congenial type of accommodation has been provided than is usual in larger cities, with their more conventional pakka materials and methods, and their consequent larger outlays for inferior space, and access to the open air.

Near this new group of houses is an older colony, of roughly built huts of untouchables. These huts are more or less outworn and insanitary, while their situation is no longer acceptable to their new neighbours, who are all caste people. It is gratifying to note that a good and higher-lying site of two acres (to be extended to four) has been generously provided by the Maharani for these people; and that their removal to better homes, in a village-group of their own, will soon take place.

This removal will next afford space for the "Bucca" colony (of camphor-bead makers, etc.) who at present occupy an overcrowded and insanitary village-site in the city, near the sea-front; so that the improvement of this area may also be carried out, and it is hoped again with advantage to the people dispossessed, rather than with that too common neglect of their re-housing, and consequent overcrowding of other quarters, which has too long been common in larger cities and under would-be progressive municipalities, zealous for material improvements, but less considerate of their poor constituents.

Nor is this all: at Burujupeta Hill, now being quarried away, the cow-keepers, who at present occupy a large area, and who must shortly be dispossessed, are being provided for, also in part of the neighbourhood to be vacated by the untouchables.

I am not informed as to how far provision is being made for model byres, etc.; but the opportunity is manifest; and I trust it will not be missed by so considerate a municipal body, and this with due reward in the quality of its milk-supply and the improvement of public health accordingly. The occasion is one for participating in that hygienic reorganization of the milk-supply, which is now so pressingly before cities everywhere.

* For map pleas see after page 49 *infra.*

II

We come now to the material planning of this area. Its study, though at first sight peculiarly simple, is rendered obscure by the extreme vagueness and inadequacy of the plans available. From these plans, and the drawings and tracings made from them, even the most conspicuous landmarks, as temples, etc., are too commonly omitted, so making their interpretation a matter of difficulty, discussion and doubt, even to those familiar with the localities, and responsible for their improvement. Such positions and dimensions as are given, constantly turn out to be gravely inaccurate; sometimes even so misleading as to be worse than no plans at all. This badness of plans [largely mere tracings from Revenue Atlas, or from former tracings, or enlargements of old surveys, often greatly modified since their execution] is a source of waste of time and trouble, which cannot be too sharply commented upon at the very outset of these inspections. Yet not without practical suggestion. I am aware that large and improved maps are in contemplation, but municipal improvements cannot wait for this. I would therefore suggest the official map-surveyor, who in ordinary circumstances would naturally work over the whole of each town in his accurate fashion, and with corresponding expenditure of time, should be instructed first of all to go over, check and correct the plans of those portions of each town which are being selected for improvement by the municipality. He should broadly indicate their contours.

This Maharanipeta Road scheme affords a case in point. No one looking at its plan merely can realise how much contouring is here required; with this the lay-out of the main new road and its minor associated ones (at present a mere product of drawing-board and set squares), would certainly have been far more successful. I understand that another design, made by the Engineer * to the District Board, was on contour lines; but this, in the haste of housing the Salis after the flood, was overlooked. As regards the upper portion of this road, which is little more than marked out, it is still worth considering whether its gradient should not be somewhat improved, by curving its upper portion somewhat downhill, towards the end of the present police lines. These can still be extended backwards from the Main Road, instead of alongside of it. A better space would thus be afforded on the upper side of this new road, between it and the Sandhill Terrace.

This Sandhill Terrace, I understand, it is proposed to level; but can this really be satisfactorily done? Is not this a travelling sand-dune, pushed before the prevailing wind, and needing rather to be fixed by trees? Palms are already keeping this partly in order.

The area of sandfields behind, nearly up to the bull-slaughter-house, is indicated (but ill-defined on plans) as belonging to the municipality, and its lay-out should be also considered without further delay.

Before building over this, should not the suggestion of Mr. Arbuthnot † be considered?—that of cheaply and effectively utilizing a large quantity of the bulk (and certainly much of the surface) of this Sandhill property, by running the sand down a wire to the swampy land which is needing reclamation at a not immoderate distance below? In view of that surely approaching development of Vizagapatam port to which we shall come later, this simple and economical method of improving one side of the town by also improving the other, and all this with an inexpensive installation, and with gravitation for its cheap and simple motive power, must surely recommend itself.

The more this lowering of these seaward sand-dunes and slopes can be effected, the better will the invaluable sea-breeze enter the town, which these heights at present too largely shelter from it. Here is a manifest gain to comfort and working efficiency; that is to public health: while the material gain to the town, from spreading its edge westwards, by raising the present swamp, is doubtless even more obvious.

The sand-slope behind the new Sali huts is at present too steep, and too near to them, and the present choice—between prickly-pears with their snake and vermin fauna, and sliding and blowing sand—is a most unsatisfactory one; whereas the gentler, but still considerable, slope which would remain, were the top of this sand taken away, could be planted with palms and other vegetation, at once useful and beautiful; and the bank would thus be fixed permanently.

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* Mr. P. B. Arbuthnot. † District Board Engineer, Vizagapatam.

Now that pipe-water can soon be had at the level of the Collector's office, the lay out of the upper portion of this estate should be considered; and the future residential character of this fine situation with its splendid views, seaward and landward, should be determined, though of course kept subject to modification.

III

I have heard Waltair repeatedly described as a Brighton, but the comparison is quite inadequate: it corresponds rather to fine portions of the Riviera. I have not had time to devote to this portion of the town any of the attention it deserves; but its development is well worthy of attention, both from the municipality and from its town-planner. Now that the Bombay Town-Planning Act has passed through, it cannot be long before other presidencies and their cities acquire similar powers, to frame and further town-planning schemes; and here a well considered lay-out for bungalows, of moderate garden area, would surely attract both summer and winter residents, and from many places, with builders accordingly. The improvement of the broken nullah ground towards the shore is of no great difficulty or expense: and for terracing and planting, the adjacent Forestry Office, and its grounds, afford both example and guidance.

The development of this watering place quarter, descending to a continuation of the present Sea Road or Esplanade (and to a future parallel road at higher level) will of course correspondingly increase the demand in this neighbourhood for dwellings for servants, peons, chuprassies, etc. Hence the municipal area, already partly allotted to huts upon the westward and townward slope may grow for a long time to come; and its expansion should be amply provided for, unless new congestions are to arise.

Houses for clerks in the Collector's office, etc., might also be provided in this quarter, and the congestion of the town thus would be further diminished.

IV

The Sea Road between Vizagapatam and Waltair is beautiful; and its continued extension northwards will further improve its attractiveness: while in the next generation if not in ours, it will doubtless be widened seaward as an Esplanade. The checking of the ugly and mischievous prickly-pear should be attended to, and this not merely by mere extermination: its more pleasing competitors should be fostered, in their work of binding sands and adorning them.

As we approach the older end of Vizagapatam town, we also see this at its best. But the practice of building high walls to maintain and shelter terraces above, when it is carried too far, as at the Town Hall or the Court House, has the worst possible effect, in these cases practically concealing both, buildings altogether, and by the dullest of screens. The Hotel next the Court, with its low wall and simple piers, affords a far better treatment of its frontage, as well as a more economical one; and it also fully admits the sea-breeze, which the other's big useless terrace-walls must largely deflect over the building which requires them.

From this Sea Road we may consider the ways of entering the city; and conversely, the citizens' ways of reaching the sea. Here again my time has been too limited for adequate study of the full set of alternatives, one by one and from end to end: in fact not only from Sea Road to Main Road but from sea to westerly swamp as far as may be; in view of that approaching expansion westwards which the Port development must bring.

Of the clearing of Sali Peta the vacant site remains; and unless I mistake, new plans for this have not yet been prepared. I must accept the assurance that this thorough clearance was necessary; and I have already spoken with appreciation of the re-housing of those dispossessed: still I submit to all concerned that the more normal and more considerate procedure, of *building new huts before demolition* of old ones, is far more likely to yield good results. Mature plans are thus assured; and speedier and more economic execution becomes possible also.

In the removal of Burujupeta Hill there is bold town-planning conception; and though such important features are commonly worth preserving I feel bound to accept this removal as an advantageous one; since at once favouring the breeze and

improving through communications. The execution of this by a contractor without expense to the municipality, and with good results alike to the roads, and to the cheapening of building materials, reflects credit on the municipal house-keeping.

The uses of this site are also obvious. First, for the junction of Sali Peta with the widening and extension of Ammavari Lane. Next, for a road transverse to this, from the Main Road towards the sea, though the exact planning of this (as a possible partial alternative for the two designs at present shown on plans) seems as yet hardly successful. Thirdly, for new houses—possibly including some extension for the cow-keepers of this neighbourhood?

V

This clearance brings us fully to the difficult question of the course of the new transverse thoroughfare, between Sea Road and Main Street, and doubtless ultimately beyond this, towards the present swamp, which is the future site of New Vizagapatam.

Yet towards this needed improvement, of a transverse thoroughfare, the town-planner will find it best to begin *not* with the discussion of the rival alternatives upon the general line selected.

Before entering upon this, let us rather consider the growth of the town, and this from its earliest past, and the extension and elaboration of its plan accordingly; its complication and confusion also, up to the present.

In general plan Old Vizagapatam strikingly recalls, both by its geographical situation and narrowness and its at first Dutch lay-out, the City of New Amsterdam, since better known as New York. First we find the Old Indian Port, of which the present fisher-village, doubtless again and again rebuilt, is the surviving relic: while the later mosque and cemetery represent the period of Muhammadan ascendency; and the poor and unhealthy little village northward presents the great decline. The Dutch, whom not only tradition connects with this place, but orderly survivals of town-planning also, may next probably be responsible for the direct road through the Fisher Village, and for the sites now occupied by Port buildings, etc. This area may probably have formed the bulk of their Old Town; but later, as prosperity and European population grew, would come the orderly lay-out of their New Town; which ranges up to the area till lately occupied by the Government Buildings, from Collector's office to Civil Court, etc., and stretching right across, from swamp to sea, which occupies what is to this day an unmistakeable Fort. This Fort space may have been obtained by the appropriation of an old fair site, or that of its resultant bazaar, or not improbably something of both.

The Main Street of the town next the Port, and what was then the Main Road in the country, had thus their direct continuity interrupted; and the Main country road is here deflected for obvious military reasons to a new Fort gate farther east. The road enters appropriately between the Fort Guard room and the Civil Court, so that here literally, as so often in old cities, we have here in germ a "Sublime Porte," with its doing of justice at the gate, as was the old and expeditious fashion.

Outside this old Fort begins another New Town. Of this the development may also be approximately deciphered from its plans, quite independently of the town's annals, with which I am unacquainted; but which it would now be of interest to compare with the graphic record which is the very plan of the city itself.

The Main Road once deflected, the little bazaar which may pretty certainly have occupied its old straight course outside the Fort, would have to follow this; but dockers' and sailors' dwellings would arise here, and doubtless with the usual intricate overcrowding. Of this there are still traces at three or four points (as for instance in the pushing of the Sea Road outwards to a new course in this neighbourhood).

Both on the north and to the south of this Fort area, and close to its stockade, were planned, for strategic reasons, roads running east and west, from swamp to sea. The south of these, next the Port, is naturally a through street; but the north and landward road, since at first mainly a sentinels' walk, has never fully acquired the character of an urban cross-thoroughfare. Moreover the military planning, with its

slight southward inclination of the Fort wall, so as to command the Sea Road more fully, was unfavourable to this; and the Sea Road is thus more naturally reached by a turning to the right further out.

The position of the Municipal office outside the Fort gate marks this as belonging originally to the outside Bazaar town, though this has necessarily overgrown the original but smaller Port town. Similarly the position of the Police office is explicable, as that of the old guard-house for enforcing the deflection of the Main Road to the Fort gate, and as controlling these and all other entries, from the Sea Road or the swamp side also, as well as regulating the Bazaar townlet, between it and the Fort stockade.

Beyond the area, the Main road has first been bordered by large bungalow compounds, laid out by the old merchants; pleasant country homes like those which fringed the curiously similar Bowery (Boerij) of old New York. The Dutch cemetery, which would naturally be placed about the limit of the Dutch town, at the time of its acquirement, has been gradually enclosed; and the town extended as far as the block in front of what is now the Cathedral.

With this growth of wealth and population, and the resulting differentiation of classes, there began a fresh town-planning movement, now regular, and in the style of the later eighteenth century: and this well-nigh doubled the area of the little town. For now arose behind the spacious compounds on each side of the Main Road, that regular series of parallel lanes—narrow indeed, but decent, and convenient enough for a population requiring little or no wheeled traffic—which give a new and distinctive character to this large portion of the extending town and throw an interesting light upon the standard of housing and general economic prosperity of their builders.

The irregular lanes which lie between these straight streets and the sea are plainly those of fishing and other villages, which then corresponded to the present Bucca Colony today, and which in its turn is now to disappear. The formation of a regular east and west thoroughfare was thus unfortunately blocked; and only a rough substitute for it arose irregularly, quite outside this planned area. For of this, the northward edge was defined merely by the natural run of drainage towards the sea; and this road, like so many in Indian towns, thus follows its course.

The position of the Cathedral, though today so excellent, at once central and characteristic—was plainly at first one of the humblest. As befits the apostolic tradition of fishers of men, and of preachers to the humble classes before the rich and great; the original Catholic Mission which this great church replaces, would cheerfully take up such a modest place, at the very extremity of the city's growth, as would be permitted by (and inconspicuous to) the frankly hostile Protestant traditions of Dutch and English alike. This outside fisher-lane however would become well-trodden by the folk from the sea-side fishing village; and this by the Friday fish-purveyors of the clergy, who were thus materially appealed to by them as well as morally. It is this humble lane which has thus developed into what is now the most important, if not the most convenient, east and west thoroughfare of this portion of the town: and it is interesting to note how it at once compares and contrasts with the original Main Street of Glasgow, which arose in this way, as the path between the Cathedral and its fishing-village. This mode of origin may be traced in other European ecclesiastical cities.

How far may this historic, and central, thoroughfare be now improved? The irregular open space between it and the Main road should certainly become a public square; and this might be effected with little expense. Widening beyond this is however difficult and costly. The fine Temple which a little way east of the Cathedral, adds another feature of interest to this road: and the question may be asked: May not both the Cathedral authorities and adherents, and those of the Temple, be able and willing to contribute something towards the improvement of their respective situations and their common thoroughfare? The present existence of what might easily be made a fine "*Temple Place*," corresponding to the "Cathedral Place" is a notable advance upon the state of things shown in the old plan and tracing provided to me, one very inaccurate (indeed which should be obsolete—although that upon which the municipal improvement scheme is actually working!).

Note upon the plan * that from the Bucca Colony an old lane runs in the direction of the Cathedral Road, but is shown as ending blindly. Since this colony is to be replanned, its future wide cross-thoroughfare can easily be linked up with Cathedral Road by widening and extending this lane.

Again, the Ammavari Lane is shown upon this municipal plan as to be widened. The very first bit of widening of this, at its southern end, next to Cathedral Road, would relieve the traffic upon the easterly part of this by allowing a portion of it to pass easily into the long lane almost parallel to Cathedral Road, and which it is in any case proposed to widen in its easterly part, in fact into the main cross-thoroughfare through the present Bucca Colony.

It will be objected that this change will also work the opposite way, by bringing more traffic from the Sea Road into Cathedral Road than it can at present bear, until widened. But it may be answered that this makes it all the more worth while to widen Cathedral Road. At any rate, it is worth considering what the expense would be, and comparing this with the expense of the other schemes, as drafted upon the municipal tracing.

At present there is no cross thoroughfare north of Cathedral Road until we come to New Agraharam Road; and this is unfortunately too narrow to be sufficient for much traffic, while its widening would be expensive, though the replanning of Sali Peta may make this worth considering. Hence the two schemes of successive Muncipal Chairmen, for a better thoroughfare midway. The earlier of these schemes is a straight cut through the intervening labyrinth, and has the disadvantages of such too easy solutions, those of serious disturbance to intervening property, and of costliness accordingly. The second scheme, that of widening (on one side only) two existing thoroughfares from Main Road and from Bucca Colony respectively, has the merit of economy: but a grave demerit also, in that these two widenings do not meet. They fall into the Chengalarow Peta Road, but this at a distance of two blocks apart. This road would thus be congested by this additional traffic; while its widening would be expensive, probably nullifying the economy of this scheme. Moreover, the double-elbow upon this plan would make the road awkward for driving, and still more for motors. I regret then that even this scheme cannot be recommended as an adequate solution of this difficult problem of crossing the town at this point.

Not to leave this problem with a destructive criticism merely. I submit an alternative suggestion, indeed two alternatives, for straightening the thoroughfare from Main Road by way of Burujupeta Hill, when this is lowered. Of course their respective cost will be considered.

The planning of the Sali Peta site, as already noted, also admits of the widening of its central thoroughfare to meet New Agraharam Road.

Finally, the proposed widening of Boyi Veedi, up to and beyond the north edge of the Sali Peta clearance, to the Chengalarow Peta Road, might perhaps also be extended a stage farther through the adjacent block, into the lane immediately parallel to it. From the east side of this a succession of lanes leads towards the road, which joins the Sea Road north of the Muhammadan Burial Ground.

Our conclusion then is:—that no single first-rate thoroughfare can be formed in this quarter without undue expense; but that the necessities of traffic, after all moderate, may be met by making a number of smaller improvements, as means and opportunities arise, until this whole series of transverse thoroughfares are improved. Among them, they will be fully capable of carrying all the traffic which is likely to arise, even with the fuller building up of the Bucca Colony site and the Sea Road quarter generally.

With the continued expansion of the town, and the growth of Waltair as a residential neighbourhood, more of the traffic will come in by the road past Hindu College and Civil Dispensary; and, by and by, down that from Collector's office, etc. Hence these widenings we have been considering are not so important after all, in view of the growth of the town beyond them.

The planning of this whole neighbourhood, of Waltair generally, and thence to Alipur and its neighbourhood, as thence to Waltair Station, and back to town, should also be considered without further delay. The town-planning of this neighbourhood

* Stitched after page 49 *infra*.

will already be found puzzling enough; and if postponed much longer, it will be increasingly difficult, if not impossible to make the best of these fine neighbourhoods, or to link them adequately with each other, and with the town.

The provision of a Public Park, and the formation of suitable Park-way approaches should also be considered, before properties are further broken up for building purposes.

CHAPTER II.—NEW VIZAGAPATAM.

So far we have been considering the improvement of the Old Town, and its residential suburb of Waltair. But no town-planner can leave this city without some consideration of that larger future which plainly awaits it, so soon as the revival and development of its damaged, and too long arrested, Port can be proceeded with. The geographic and economic importance of this situation need not here be descanted on, but simply taken as known; and the Engineering adequacy and competent execution of the port design will here be assumed.

Must we however also assume that the usual British and American procedure of port-making hitherto will be continued; or may we not now-a-days begin to hope that the town-planning of modern Continental ports, notoriously so much in advance of those of the British Empire, will at length be considered, and realised as worth learning from?

On customary British lines, up to and inclusive of the new London Dock designs (estimated to cost £14,000,000), docks, and docks only, are seriously considered by their promoters: while the Railways similarly study their own interests, and the two then adjust themselves as best they may, heedless alike of the municipality and its inhabitants, or even of the industries they alike so largely exist to subserve.

On town-planning lines, however, these two great interests are seen as but two among others. The adjustment of railways, roads and warehouses to docks, just as of offices to them all, by the architect is considered more and more carefully, so as to economise space, time and energy (and thus money accordingly) to all concerned; and the enormous volume and expense, obstruction and delay through the cartage involved by old-fashioned planlessness is accordingly reduced, largely even abolished. Each factory quarter is designed with direct and ample railway facilities from the very first; and its gradual or considerable expansion is provided for.

Ignored by each and every one of the ports of the English-speaking world hitherto, but now becoming seen as of vital and essential importance, in continental seaports, are the questions of housing, and this from the dockers upwards. In fact, their efficient, healthy and attractive housing is now becoming soon to be a basal factor in the prosperity and progress of each and every port; and the total neglect and prevalent misery of their housing, with the alternate exasperation and sullen discontent which their squalid homes produce is a main element in the explanation of the calamitous dock-strikes and disorders of London, Dublin, and other leading ports of the British Isles. Conversely, the excellent planning of dockers' housing in recent Belgian and German ports especially, has been an appreciable factor in the progress of such ports during recent years.

We may now trace the alternative methods of developing Vizagapatam, the planless traditional way, and its town-planning alternative. Let the constructive work begin: on the first assumption the multitude of coolies employed are left to find such lodging as they can in the already congested town; which they further deteriorate accordingly. On the second plan decent (even if only temporary) housing accommodation will be provided from the very first.

On the first or "laissez-faire" method, the existing railway system will more or less remain in possession of its frontage at the wharf station; and — since this site is totally inadequate for the needs of this new expansion of labour and commerce —all sorts of patchwork additions will be made by successive engineers, each altering the work of his predecessor, until the eastward expansion of the ever-crowding town is hopelessly blocked. Its ground values will thus rise; and foolish economists, orthodox or unorthodox often alike, will mistake this for a sign of prosperity. But this rise is at the expense of economy and efficiency to all concerned; and peculiarly

to the housing of the people. Upon this narrow site there is already little enough room; if business offices, warehouses and godowns, shops and workshops have all to multiply upon this space, and an increasing population have also to be lodged, its congestion will become increasingly exaggerated, with the usual resultant waste and inefficiency in commerce, the usual deterioration and disease among the people, which we know so well.

Instead of letting all this happen, and calling it "natural" with the futilitarian economist, let us briefly consider the possibilities of that adequate town-plan, which has never entered into his conceptions, and thus never been so much as mentioned, in his ponderous, yet mostly worthless, treatises.

As the town-plan of Old Vizagapatam revealed itself when studied as an historic development, so that of the new city may open out when viewed as a geographic one. For this purpose city-view and plan may happily be seen as one, by ascending the fine hill by the port entrance, and surveying the landscape it discloses.

Here our Dutch predecessors must often have viewed the splendid field for their characteristic mastery of nature which this vast extent of swamp and backwater discloses, and have revolved their plans, for redeeming the one, and developing the other, upon the lines which have built up modern Holland from far less promising natural conditions. The actual realization of such schemes was actually attempted by Bishop Tissot, though without success: yet his remaining embankments, and beyond these the goods line of the railway, show how comparatively easy this redemption of the marshes may be. The excavation of the new port, and thereafter the continuous dredging of the harbour bar, will afford a large supply of material for reclamation and raising of levels. Mr. Arbuthnot's suggestion * of running the Sandhill into this marsh may here be recalled: while the existence of the railway line also makes the further work of filling up easy. The Ross Hill, however, should not be touched: its rock is too hard to make its quarrying for this profitable, and its beauty, for its true use, of recreative and general outlook, and in fact as the very first and finest of all the city's possible parks, will surely also protect it, as will the various sacred edifices further back.

Assume then the new harbour dug, and the matter dredged and excavated deposited upon the swamp, so completing the filling up of the large portion between the goods and passenger railway lines, and even sufficing, as it perhaps may, for extending this made-up land, west of the goods line also.

This filling-up scheme would of course be proceeded with gradually: but for its area the space included by a line from Ross Hill point north-eastwards towards Waltair station will not be found excessive—say then to the hill bearing a Roman Catholic Chapel, near the Hindu cremation ground. Along the edge of this area a second outer railway line might run down to the edge of the new harbour.

Between these two railway lines the warehouses, and the storage areas for timber, coal, etc., would find convenient place next the docks. Further up, nearer the station, the factory quarter would conveniently be placed. The space between the Vizagapatam passenger line and the goods line to west of this should, however, be kept free from railways and from factories and warehouses alike; since this, assuming it properly raised to a healthy level, would form the artisan and labouring town. This should of course be designed upon adequately modern lines and from the first. The existing Vizagapatam passenger line might be continued to meet the other lines of the port near Ross Hill point with one or two passenger stops by the way. But the railway to the present wharf station would become practically disused, and its space (save indeed for a single emergency line or so) should be resumed, *e.g.*, for dock management premises.

If the present cutting through the hill can be used with safety as a road (at any rate after due attention), should not the present dangerously crowded and congested Fishermen's Village of the present port be thinned out, if not largely removed to the north side of the hill? The Muhammadan settlement near the old Collector's office is described as very insanitary; but the filling up of the swamp and its channels should here afford excellent and spacious sites for new dwellings as good as may be.

* Page 42 *supra*.

The communications of this new town with the old are no doubt so far interfered with by the present Vizagapatam station line; but, besides, a level crossing, a sloped over-crossing might be constructed. Further north, as the railway rises towards Waltair, under-crossings become possible also. The existing ways from the main road to the (reclaimed) swamp would in some cases need widening, but not always. The lines of their extension broadly suggest the plan of laying out this reclaimed swamp site, although of course so many railway crossings would not be possible.

The drainage of the town to the present sewage farm can doubtless easily be carried on across the new town also, and at the far extremity pumped upon a new sewage farm, reclaimed accordingly to fertility.

Returning to the question of dwellings, it is probable that there would be a steady increase of demand for houses in Old Vizagapatam, whose residential prosperity and value, as well as that of its shopping streets, would go on rising. The wealthier classes would of course find Waltair most congenial; and, as population increased, train facilities would attract a suburban population northward also. A modern maritime city, efficient commercially and industrially, and steadily prosperous, as the outlet and inlet of a great and increasingly prosperous inland region; adequate housing for the people, with healthy and beautiful suburbs: here in short are the conditions of a good port, even of Bombay, and at its best; and though of course on a far smaller scale, still a real one; and without the many evils with which past neglect, rather than natural difficulties, has crowded Bombay and all our other old seaports.

TOWN MAP
OF
VIZAGAPATAM MUNICIPALITY
WITH
RAILWAY COLONY
Scale of Chains
10 5 0 10 20 30 40 Chains
MAP I
REFERENCE
Denotes area partially plotted South of Maharanipet Road.
Do. already plotted North of Do.
Do. known as Velampeta.
Do. Do. Salipeta.
Do. Do. Bukka Colony.
Reference to Road Nos.
1. Boya Vidhi
2. Thumanapalleyari Lane
3. Budhirajuvari Lane
4. Ammavari Lane
5. Chellakondavari Lane
6. Kanchara Road
7. Bondavari Lane
8. Kadambaravari Lane
9. Bukka Lane
10. Agraharam Road
11. Chengalraopet Road
12. Golla Street
HILL
Workmen's Huts
Drivers Quarters
Foreman's Quarters
Work Shop
R. C. Church
R. C. Orphanage
Gnanapuram
Waltair Ry. Stn.
R. C. Chapel
Executive Engineer's Office
Old Dondaparty
New Dondaparty
Hindu Cremation Ground
Allipur
Allipur Market
Nayudutotapalem
District Jail
Police Lines
New Cemetery
Gollalapalem
Orphanage
Ganjipet
Police Lines
Magazine
R. C. Cemetery
Police Store House
Police Head Quarter's Office
Parade Ground
Police Hospital
Old Cemetery
Tomb
Suptg. Engineer's Quarters
Club
St. Paul's Church
Portion of Maddilapalem Estate
To be reclaimed
Digdhora Konaru
Normal School
Mahomedan Burial Ground
MAHARANIPET EXTENSION
A. Ramdas Naidu's Garden
A. V. Jaggarow's Free gift of Land
Port Officer's Quarters
Racket Court
Theatre
Observatory
Conservator's Quarters
Conservator's Office
Maha Raja's Bungalow
Lunatic Asylum
WALTAIR
R. C. Chapel
Post Office
Police Station
Uplands
Hillock
Gymkhana Ground
Mason's House
Sewage Farm
Vizagapatam Ry. Stn.
Civil Hospital
Jaggarow's Lane
Island Hill
A. V. N. High College
Bull-Slaughter-House
Combined Offices of S. E. & Ex. Engr.
Dt. Board Engineer's Office
Collector's Office
PROPOSED ROAD
Srirangarajapuram
SEA ROAD OR ESPLANADE
Telegraph Office
R. C. Cathedral
Office Guard Room
St. John's Church
Municipal Office
Dutch Cemetery
Ross Hill
200 Feet High
Old Collector's Cutchery
R. C. Church
Post Office
Civil Court
Police Station
Registrar's Office
Temple
Town Hall
Garrison Reading Room
Mahomedan Burial Ground
Wharf Station
150 Feet High
Mahomedan Quarter
Mosque
Steamer Agent's Office
Custom's Office
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1915

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TRICHINOPOLY.*

Here one is fortunate as in few cities, by being able to climb to an outlook of the greatest extent and magnificence, an outlook over city and region alike, such as I have not had elsewhere in Southern India, and which compares with that from the Rock of Gwalior or from the heights of Edinburgh.

The great rock, though so long mainly occupied and dominated by its temple, seems to possess more vestiges of the ancient and perhaps original Fort than are now easily discerned; and an antiquarian scrutiny of the old quarters immediately surrounding the rock would doubtless reward the historic enquirer.

II

Before leaving the rock a criticism must be made of the unsuitable and wastefully expensive decoration of the large new water reservior upon the south-east shoulder of the hill. For this is adorned with enormous neo-gothic battlements, after a fashion set by readers of the Waverley novels, which was supposed to be reminiscent of the glories of the Welsh castles of Edward I, and from about 1843 to 1860 were stuck upon modern jails and "restored" county mansions alike. It does not mitigate the irrelevance of this particular imitation that it is in Southern India, where this style was happily unknown, nor that it is executed with the huge and costly substantiality of the civil engineer. Not only economy, but greater beauty would have been attained by displaying, instead of bedizening, the simple massiveness which such an elevated tank requires: and if further enrichment be, as in this case, desired, it should have been of a kind relevant to the nature of the building, and not rudely mimetic of a remote style of feudal architecture, unintelligible to the Indian community and long obsolete at home. Is it asked what would be the appropriate treatment? At best nothing beyond such simple, yet massively Egyptian, outward slope (or perhaps mathematical curve) as is suggested by the increase of pressure upon the wall of the reservoir as the water deepens from top to bottom. But it may be said that some finish is needed; hence these battlements. A simple outlook, with such moderate parapet as is necessary, and below this a moulding or a simple frieze, would have been amply sufficient. But (the more since economy has here been no object) why not arrange to obtain from this pressure of water its appropriate and decorative expression, that of a fountain? On festal occasions at least this might be turned on to flash and glitter in the sun and throw its rainbow emblem of hope and promise upon a little garden of verdure and flower, which would grace the great brown rock like the jewel ... by its ancient war-lord. It will be replied that this battlement is just such an allusion to the military past of the rock. But no such allusion can justify the militarising of a water-tank: for what can be more peculiarly inappropriate than to adorn a thing at once so important and so vulnerable as a reservoir, in the very way to attract fire, by disguising it as a Fort?

This destructive criticism cannot be amiably omitted, uncongenial to its designer though it may be. For it is only as we abandon such literary reminiscences and such mimetic treatment in our architecture and our planning, and deal with the nature and common sense of things as they are, that we attain to a handling of them which is at once substantial and artistic. Moreover the first problem of the town-planner in every city is to press that its (after all very limited) resources are not to be wasted upon such mere decorative pretences, which bring architecture and art into disgrace with plain and practical men; but on the contrary that expenditure be restricted to real and vital uses. With these however a relevant and appropriate beauty arises, as indeed with every job of usefulness and skill which a man puts his heart into doing.

III

Descending into the town we find something of the usual labyrinth of lanes behind the main streets, and these not without some overcrowding, especially north and east of the rock. But there is nothing to justify wholesale demolitions. It is quite enough to apply that gentle, yet thorough-going method of "conservative surgery" which has been so often described in this series of reports.

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* For maps, please see after page 53 infra.

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Coming southwards through the town, large areas are again indicated, both east and west of the Main Bazaar street, which are crowded beyond what they should be. Extensive destructive proposals are already drafted (in part even authorized and provided for by Government); but on scrutinizing these areas, as notably at the southern end of the old town, the usual result appears—that each and every block can be treated, at once more economically and more sanitarily, not by the proposed sweeping clearance, but with conservation of practically almost all the decent homes (not merely the pakka buildings); and this, as usual, at a mere fraction of the existing estimate for a far more destructive but less efficient treatment, in this case from one-half to one-sixth.

That the old town can thus be cleansed, its lanes widened, and with spaces opened out and with destruction of but few homes, has now been worked out upon plans of representative areas; and this not only in sketch on the spot, but subsequently in detail, in the recent practical class at Madras, with the City Engineer.

Any disappointment with these measures will be cleared away, as their detailed house by house thoroughness is realized; and as it is seen that both the large outlays and the long delays which are necessary for a small area of destructive clearance will suffice to cleanse well-nigh the whole of the old city; and this without that intensification of congestion elsewhere, with corresponding general rise of rents, which are the inevitable resultants in Indian and European cities alike of the sweeping and wasteful destruction for which the tradition of Haussman is responsible, but which it is the first duty of more considerate (and less unskilled) planners to make unnecessary.

IV

We now leave the town and come southward through an area not less extensive. Old irregular villages and suburban streets, missions and public buildings are here all confusedly clotting together; and with new insanitary areas and congestions arising to match the old ones. Yet this part of the town is still capable of being cleared up to some extent, by the preservation of its main southward thoroughfares and the improvement of transverse ones also, and of course with improvements in detail without number into which we cannot enter within these limits.

Coming further south, one asks—what of the large Government site formerly occupied by the Sepoy lines now demolished? How far is this available for suburban planning?

Again, in a town so long and comparatively narrow as this one, and with a good main central thoroughfare, is there not scope for a tramway?—perhaps even for the extension of this tramway to Srirangam?

We return to the main town and admire its spacious boulevards on the east and west. That on the west is exceptionally fine throughout its range between the great Teppakulam to the Municipal Hospital. But why not continue and protect it from encroachment as far as its junction with the Main Bazaar Road, near the water-channel?

The east boulevard is less well-kept. It is insufficiently planted with trees and too much left to stones and rubbish; while upon these neglected spaces, huts of the very worst and smallest kind, and of the lowest type of dilapidation, are scattered here and there.

The cart-stand is said to require extension; but on inspection we see that this congestion is more or less local. Great part of its area is actually left to weeds, so that here a little better planning and working is all that is required.

The new Paracheri to east of this exhibits the disadvantage of a thoughtless application of a standard plan in a way as far as possible from anything which can have been desired or foreseen by its original designer; and the improvement of this misplanned suburb upon simpler lines, more adapted to the situation, has been strongly recommended on the spot.

V

New extensions for the more prosperous classes on the west side of the railway, have also been studied on the ground; and with substantial economy of result: every one of the serious demolitions proposed (and in this case all of good and

expensive property) proving quite unnecessary on inspection. Substantial reduction was also thus rendered possible of the length of roads and streets, and with corresponding increase of house and garden space. Plans incorporating all these improvements have now been worked out by the Engineer.

As the town develops, the question of reduction of wet cultivation must arise; or, failing this, the raising of building areas. In the latter alternative, I cannot but think that the sand of the river may be brought by simple and economical methods, as of rope-tramway, etc., to any point which may be desired. But this whole problem involves consultation with the irrigation expert and civil engineer. I suggest that the irrigator should be consulted in every case where extensions are required; as his exact knowledge of levels and requirements may be protective. Even now for instance, could he not improve the unlucky Parachori of Darenallur beyond the boulevard above referred to? Finally, is it not possible that the irrigator might do much to relieve the present difficulties of drainage in this and other towns? For when, as here, irrigation channels are at hand, why not conduct more of the drainage into them?

VI

Of course I make no pretentions to a grasp of drainage questions; yet I venture to submit my doubts whether the customary method of establishing a thorough-going drainage scheme for a great city, independent of its irrigation channels, is not too expensive altogether, even supposing it to be ultimately and permanently efficient? If, as in some countries, it were the custom, and even the duty, of the representatives of each and all of the various departments of the town's activities periodically to meet around a table bearing the town-plan lying upon it, and with the express purpose and really defined duty of collaboration towards the improvement of this plan, would we not be able sometimes to break up this costly and magnificent drainage system into useful and manageable portions, instead of drowning one small sewage farm in unspeakable fœtor, as too often happens. (I do not say that this exists at Trichinopoly!) Why not rather improve the fertilising value of innumerable minor streams, and so create a wealth of gardens?

In this connection too may be stated, for this city as for any other, the essential argument against the stereotyped rows of dwellings for sweepers. These good people at least are free from that excessive horror of manure which involves the wholesale waste of it throughout India; and if small gardens were given them, doubtless with a little initial guidance and encouragement they would soon be enriching and improving their own environment, and setting a much needed example to the community. For here and there some citizen would be unconventional enough to encourage the sweeper to lighten his labour by fertilising his own garden; and, from a few such cases, the progress of gardening and sanitation would thus go on together. A more intensive gardening, everywhere, from China to France and to Scotland, is the best and the most sanitary as well as the most natural method of disposing of organic refuse. Hence—as the organic point of view, which is maintained in these reports, and is at many points now reappearing in the world, gradually gains upon the mechanical one, with its blindness to life—there is every hope that the health and wealth of not a few Indian villages and towns—and, in parts at least, even cities,—may be gradually increased, and with much economy of their present (or projected) drainage schemes. The modern (and ancient) septic tank is surely a first step towards this; but its present wastefulness to agriculture should (and may before long) be redeemed.

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TRICHINOPOLY

PLAN 2

NOTE.—After house to house study, throughout the entire area derelict and dilapidated property is practically alone removed, so widening many portions of streets and lanes frequently into squares each suitable for a tree, with pial, shrine &c., or as a small playground, in short for the retention of village life instead of the introduction of street life. This is chosen as the least economical and most unfavourable example of this method of conservative surgery in contrast to the other, which has appeared in the whole course of the past winter's work in many cities. Yet evictions are few or almost none; no houses are reduced in space, and the sanitary condition of the entire area is improved by better access of sanitary service, adjacent spaces opened up &c. Direct passage ways increased, largely even for vehicles. Expense however estimated at as much as one-half of former scheme. (In every other case it has varied from one-fourth to an average of one-sixth or eighth, but sometimes one-tenth of customary method; and with corresponding reduction of evictions, compression of dwelling-spaces or re-congestion elsewhere.)

Properties are thus appreciated, without enhancement of rentals; whereas by the former method properties are depreciated, yet rentals raised; By the former method the owner's capital is enhanced, without the tenant's income being drawn upon for higher rentals. By the latter while rents are increased houses are deteriorated by overcrowding and repairs, though increasingly required, are less readily attended to. Hence in fact a large explanation of a distressing paradox of the wide-spread deterioration of towns through unskilled Municipal and Sanitary endeavour.

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SALEM.*

Here as usual on arrival we were plunged into the multifarious details of congested quarters and of new extensions—details obviously too manifold and complex to be satisfactorily grappled within a brief two days' visit. To save time, and to keep from being submerged, several hours of work were well spent in first getting these various plans and projects arranged, in an intelligible, because topographic, way. A suggestion thus arises, and is respectfully submitted to the Council—as indeed to Councils everywhere—Why not introduce such order into the confusion of scattered plans and projects, with their respective correspondence? The method is simple enough. First hang upon the wall (conveniently the northern one) the general map of the town: not one tinted for the mere electoral detail of wards, but topographically. The main roads above all must be clearly shown, say, in brown; and with these also the railways clearly marked: and all these to the very confines of the map, no longer absurdly cut short at the city boundary, as the bad tradition of these town-plans is; one doubtless with its convenience for revenue purposes, but useless, nay far worse, for town-planning. Let the tanks and water-courses be coloured light-blue, the slopes boldly contoured and the waste lands dotted. The wet lands may conveniently be green; and the wet and dry land must be shown far outside the city boundary; so that we may thus form an idea both of the limitations and of the future possibilities of the growing town, and not simply of the extensions proposed to-day. All religious buildings, such as temples, mosques and churches, places of burial also, should have their unmistakable tints, say, of red. With these should be indicated mission compounds, with schools of all kinds, dotted over with their respective tint. Government and municipal buildings and areas should also be plainly coloured, say, with purple and yellow respectively.

Upon another map should be indicated the outlines of a survey of castes and occupations; with these again around their appropriate temples, mosques, etc. Distinctively Brahmin, Muhammadan and Christian communities should also stand out as clear as may be from the streets and quarters in which the population is more mixed. Weavers, fishermen, chucklers, sweepers and other associated groups should be shown, and Paracheris well defined. The large industries—mills, tanneries and works of all kinds—should also be plainly shown.

Another town-plan may conveniently be reserved for water-supply and drainage in light and dark-blue respectively; and the specially insanitary quarters may be recorded on this map also, emphasised in appropriate variety of sombre tints.

In this way, there will soon arise upon the wall of the city's chamber the beginnings of that City Survey which is the indispensable preliminary of a good town-plan. The town's unity, and its diversity, are thus alike more clearly realised. The customary division into mere wards, so widely pernicious to citizenship and to civic efficiency, is thus kept in due subordination; in fact, this may best be left unstudied by all parties, at least until the approach of the election day!

Here, of course, we have the difficulty that the divisions of our town map are (in India I believe alone in all the world) treated ward by ward, each ward being represented as an island, alone in a blank and uncharted ocean of white paper. To cut these out and fit them together, and thus make a large scale map of the whole town, is an obvious necessity. But with the town-planning movement henceforward to work in, a task to surveyors so readily congenial, they will not continue this vicious heritage of mere revenue methods, but set about preparing continuous town-plans, like those of all other cities and countries.

II

With such city surveys thus before us, the town-map of Salem would become readable. It is no longer a mere heterogeneous congeries of wards, or even of villages. As in so many towns, the centre here is plainly the old Fort (absurdly called Ward No. 6) and the origin and strategic position of this Fort, defended on two sides by the rectangular bend of the river, is plain. The detailed study of its

* For maps please see after page 61 *infra*.

lay-out, orderly as the plan shows, would doubtless well reward attention. Let us at least note the spacious boulevards which have replaced the ancient fortifications on east and west, and regret that such fine thoroughfares have not been continued or imitated, in other parts of the town.

East and west of the Fort runs the main road, on the north somewhat deflected by the old military zone. On this space now stands a series of Municipal buildings; and north of the road, the Courts, the Collector's office, etc., have completed the arrest of the otherwise natural northward expansion. How far new expansions in this direction are still possible beyond these (*i.e.*, between the toll gate, and the Mariyamman temple on the west, and the Sukhavaneswaraswami temple on the east, and northward to the Maravaneri tank), we may enquire. The northward village of Kumaraswamipatti, and its surroundings, may also be suitable for extensions.

Returning however to the main road, east and west, we have, on the east, the old market town of Salem proper (including most of wards Nos. 8 and 5), but extending southwards into Kichipalayam (ward No. 4) and eastwards into ward No. 9 with its more recent planning. Finally in this direction, the village of Ammapet has grown up into "Ward No. 10." West of the Fort, the village of Shevapet similarly has grown up; and it also has spread southward, apparently more lately, into the large suburb of Gogai.

III

We may now take the various improvements in order, so far as time has allowed; on the one hand studying the congested areas, and on the other proposed suburbs.

First, the congested areas. Proposals of destruction are here sweeping and costly; *e.g.*, Rs. 94,000 for Kichipalayam alone, in which no less than 400 houses are proposed to be removed. After devoting a few hours to the detailed study of a portion of this quarter, undeniably a perplexing labyrinth, and working out a portion of it in detail, leaving the sketch to be continued by the surveyor, one unhesitatingly reports that there is no necessity for the demolition of anything like 400 houses, probably not even of 40. As in many previous towns, a careful and conservative surgery is what is required, not this sweeping amputation! I cannot too clearly put on record the affirmation that this too common method of wholesale destruction, whether it be initiated by municipal authorities or by their sanitary advisers, is a wrong one. To begin with, it is far too costly, even for the resources of municipalities and of Government put together; since on this principle we should have to destroy and rebuild half of India—cities, towns and villages alike. These sweeping demolitions, considered with regard to the difficult game of planning, are essentially in line with the overturn of the chess-board and its pieces by an unskilled and impatient player; but this, as every one knows, is the poorest way of getting out of check! And here, where the pieces are not the mere toys of a drawing board, or even objects of civic and natural economy and value, but are homes and centres of neighbourhood life, each dear beyond all things to their occupants, no criticism can possibly be too serious. It is more than time to protest against this whole method, and to entreat municipalities and Government alike to be reconsidering this entire policy of wholesale demolition, insanitary though these neighbourhoods may at present be!

Do we then advocate the cessation of these sanitary grants upon which this policy depends? Certainly not; it is its better diffusion and application which is pled for. Rain is good, but not to wash away the soil; it is desired to fertilize the field, but not to spoil the crop. So with sanitary grants. A sum such as is proposed for the small quarter of Kichipalayam alone cannot proportionately be found for every other quarter of this and similar towns, even by the most prosperous and most generous of Governments. Better applied, this grant would suffice to clean up half the town. We do not destroy other things which get dirty: why then houses, and wholesale?

I am aware how harsh this criticism must seem: but I plead with any to whom it may seem discouraging that they will reconsider such a neighbourhood as this in the light of a fresh improvement plan. This was begun on the spot, and left with the surveyor to be continued; and kindred ones similarly initiated for other areas. I ask it also to be considered that these grants are mainly spent on destruction—on the ammunition, so to speak, of a vigorous local bombardment. No doubt that

comparison goes, in some (not all) respects, too far; but it is needed to bring out the essential situation. The general failure to reconstruct which has as yet characterized practically all demolition schemes, whether in India or elsewhere, is thus explained. The available public money is mostly spent in destruction; and the valuation paid to owners for compensation is notoriously insufficient to enable them to rebuild at the present rates.

*(Here, as to rebuilding, and to proposed housing bank, etc., my recent report on Cocanada may be referred to.)

Take next wards Nos. 5 and 8, lying on each side of the Main Bazaar street of Salem. This northern area No. 8 is peculiarly intricate and difficult. It is satisfactory, however, to recognise in this block that the first plan of new thoroughfares cutting across it in both directions, at great expense (and to little purpose after all, either for traffic or for sanitation), has been replaced by a later draft plan, very much less destructive and costly, with only two new thoroughfares. But these are not connected with each other; and neither can be said to be urgently required for trade or for communications. They also are open to the objection of leaving too large insanitary areas untouched. Even a third criticism appears. The corn bazaar on the main street presents the most extreme example I have met of sub-division into narrow strips; its shops having been divided, and these sometimes sub-divided, until at last they are only six or five feet wide. This indicates the extreme congestion of a most important traffic, and the corresponding costliness of alteration. Moreover to destroy an appreciable percentage of these shops is something which mere compensation for their rental value cannot really compensate for. If expelled, these traders have nowhere else to go to; and their competition for shops must be increased, the rentals of the whole street accordingly, and thus the staple food of the people will be rendered appreciably and permanently dearer; thus tending to increase the poverty upon which insanitation so much depends. For all these reasons, therefore, we set about the preparation of a fresh draft plan.

The corn trade is now little interfered with; for our widened lane only a single shop has to be destroyed, and that the smallest of the whole line. Within the block itself, a considerable economy is effected over even the less costly of the preceding schemes. Every house in this interior area is now reached by sanitation, instead of a large proportion of them being left much as they were before, on the preceding plans. The existing homes are therefore mostly retained; with corresponding economy of Government grant, and to the immense satisfaction and advantage of their occupants. Furthermore, conditions and aspects of old village life will be revived in the old lanes, thus widened, but still characteristic and homely, with their new and airy squares, which may now be adorned with tree and pial well or shrine. The one disadvantage which can be alleged is that the straight lines of the drawing-board are not inserted; but after all these had not been found practicable in either of the two preceding designs. The re-study of it in detail which has since been given by the city engineer and sanitary inspector has been incorporated in course of the work of the practical class. This crowded Grain Bazaar on the north side of the street, with the Vegetable Market opposite, gives a very striking example of that localisation of traffic well-known to economic town-planners, but as yet too readily overlooked in Indian towns, by those of merely sanitary or street-widening aims.

Struck by these inconvenient looking and overcrowded shops, a benevolent town-council erected a fine new "Victoria Market" in an excellent open space out a couple of furlongs off; and entirely in the dignified, quiet and peaceful company of public and municipal buildings. Yet such is the obstinate conservatism of trade, that after thirteen years we are told that not a seller or buyer has yet been persuaded to go, and the market stands practically derelict accordingly. When I ask if any suggestions have yet been made as to how this difficulty may be got over, I am gravely offered the solution that "its use should be made compulsory". I ask "how can this be done?" "Municipal regulation should be made prohibiting the present traffic within at least half a mile of this new market-place!" But was any municipal over-regulation of the past ever more arbitrary than would be this? Could any be more vexatious in its interference with the natural course and conduct

* Page 1 supra.

of affairs or more impracticable? Far better to confess the failure, and scrap this market altogether (though some other useful purpose could surely be found for this) than now to attempt to impose a measure in such direct opposition to the habits of a leading trade and its public. What elected body could survive such a despotic following up of one blunder by a far worse one?

Just opposite the crowded Grain Bazaar is a Girls' school, and opposite that a temple. Pity that the new market had not been there and the school where the market is! Even the tenderest girls can walk a extra furlong or two, but trade will not.

So difficult is it to plan for an old established line of business that I cannot feel sure that even a grain market on the opposite side of the same street would be successful. Grain, as everybody can see, is best on the sunny side of the street, both for keeping and for showing; and the problem is thus to lengthen the bazaar on the sunward northern side of the street than upon the shaded southern one. Vegetables, on the other hand, suffer and dry in the sun, and need shade. Hence the preference of this class of dealer for this south shaded position.

All such considerations are obvious enough when thought out; but my experience hitherto of the proposed shifting of businesses and populations in any or every town I have visited gives me the deeply disappointing impression that such simple common-sense considerations are constantly being overlooked, and with crude and unsuccessful town-planning as a consequence, unnecessarily costly to the municipality and too often disastrous when all is done. That is to say, such plans are apt to propose (and when carried out, to involve) damage to business, with resultant injury to prosperity, it may be of producers, traders, or consumers, and sometimes all alike. No statistician can exactly estimate this; but it none the less finds its nemesis in that deterioration of localities (if not even the bulk of the town) which so often follows the well-intentioned but badly planned clearances of late too common in municipalities. Such deterioration is too often also evoked by the suggestion of further large and ill-considered schemes by sanitarians, and would only be increased anew by uncritical acceptance and subsidy from Government.

IV

Let us pass now to Shevapet, with its proposed new east and west thoroughfare. To find a ready course for this, with the approximate straightness desirable for a main thoroughfare, is curiously difficult; but the general course selected, I am glad to say, appears to be the best one. Improvements in detail are possible; thus I have suggested the formation of a small public place at an important road-junction, and where a large area can be obtained with trifling additional outlay, by simply widening the existing street area a little further. Trees could here be planted.

The present insufficiently comprehensive view of all such city improvement is indicated by the fact that this new thoroughfare, though rightly decided on, has not been thought out at either end. How is this new road to be adjusted to meet the main country road westwards? In other words how is it to join the existing main street as this leaves the town? Or has traffic been sufficiently considered as it comes in from the country? If this new street be made wide enough, it will of course relieve the too narrow and congested main street towards the north of the Fort; but is its proposed width sufficient for the future? I think not.

Again, the new road gets nearly as far as the Fort in the south, and by a straight and satisfactory course. Yet while this opening and widening is proposed in Shevapet, the very same road is just now being encroached upon further east! Indeed almost blocked; thus the new slaughter-house has been laid out, as usual, without any considerations of planning, and is here already seriously in the way. Still it is just possible to get through. Thence (passing other ill-planned obstructions, of cooly lines and unnecessarily prominent latrines) our new road runs south of the Fort to join its east Boulevard.

This western half of the town, up to the river, will thus have two main east and west thoroughfares, instead of only one as at present. Then why not continue this great improvement to the eastern half of the town, and thus double its advantage,

and more? For this purpose a new bridge will be needed, at the south-east angle of the Fort. Thus the existing road south of ward No. 5 can be reached. Let this be widened and continued north of ward No. 4 by a new road (at the utmost a furlong south of ward No. 9) into ward No. 10. Ammapet will thus become like Shevapet with a double east and west thoroughfare. The whole of Salem in fact, instead of being as at present a succession of overgrown villages strung upon a single main road will thus become a town, with a double main thoroughfare; and even its present areas of congestion will largely be relieved, automatically accordingly and without demolition, because their expansion and their business are facilitated, enabled to spread over a longer distance and a widened area. Yet even two such parallel thoroughfares are not enough for the future. A third line of communication should be planned for north of these, and not left unconsidered till it has to be cut through at some later date and at great expense.

V

Similar study is needed as regards additional north and south thoroughfares. These are here no less obviously necessary; for the main road running north from the Fort is still practically the only one which is as yet adequately developed, and this for a town extending nearly two miles east and west, and no doubt destined to grow.

The Arisipalayam extension will aid the development of the needed new north and south road at the west end of the town; but that at the easterly end should also be considered without further delay.

New railway developments are predicted, of which I learned merely by accident. I failed to obtain plans and particulars upon my visit, and the rough sketch, subsequently sent me, shows far from sufficient study of the problems of road crossings, town extensions, etc. People are no doubt glad to accept a railway, on almost any terms; but this should no longer prevent due regard for the future. It is to be hoped that this constant tradition of railway planning, without due attention to town development, will be put a stop to by the proposed Town Planning Act.

VI

Had time allowed, a study would have been made of the River banks, and these alike from the standpoint of utility and beauty. Utility of various kinds; first in relation to thoroughfares and bridges, but also in relation to cultivation and habitation. Can any practicable and profitable treatment of the water-course be suggested by the irrigation engineer? There is at any rate no reason why such a length of landscape beauty and possible fruitfulness should be left to prickly-pears and snakes, to filth and rubbish. Private and public gardens, tank promenades, in fact even park and park-way, of course here suggest themselves.

VII

We may now consider the proposed extensions of the City.

To these only brief space need here be devoted: for the gratifying reason that each and every one of these three proposed sites visited seems suitable and convenient; in fact excellent. As regards their planning, however, a note must be made on each.

First on that south of Kichipalayam. Here the proposed sketch-plan is unsatisfactory, and needs re-consideration in every respect. The well-known "standard plan" which has been sent out as a too solitary suggestion to every city, has here been copied mechanically; as is shown by its bringing a sanitary lane instead of a frontage upon the main thoroughfares. Existing roads and wells, trees and rocks, and natural features generally, are all ignored. A site-plan requires first to be prepared, and upon this the preparation of a good design would be easy.

The proposed removal of the Paracheri turns out on examination in the field to be unnecessary. The utmost caste objections can easily be met, by removing the very few houses which are close by the roadside, and by planting the space with trees or as an ornamental garden, if no low caste tenants offer for the vacated sites.

The Paracheri may even be left, and extended, especially southwards, without the least interference with the new Garden Suburb; but those few of its members who may be dispossessed as above should of course receive full compensation for this.

It has been suggested to take an alternative site instead of this, north and south of Maravaneri tank. My own inclination would be to both sites, as demand springs up, and as funds allow.

VIII

The new land being acquired west and north of Arisipalayam is also beautiful. No plan of this had been prepared; but in the practical class held lately at Madras in connection with the Town-planning Exhibition this has been approximately drafted; and I am pleased to say, with car streets as well as temple. But a fuller and precise site plan should now be prepared, showing the existing mangoes and palms, and other valuable and beautiful trees; and the present sketch-plan can then be revised and its areas varied, so as to preserve, not only for the bungalows, but for the smaller houses, also, a share of these fine orchard trees, at any rate much more fully than is possible upon the sketch-plan prepared at Madras without these particulars.

IX

The proposed extension at Hastampatti to the north, a fine site of about 100 acres, has long been under discussion; and I take it that the lack hitherto of any adequate plan has been one of the factors of delay. This scheme is for large bungalows, mostly with two acres, some of one, none with less. But no plan was shown, beyond that of site, with present roads! It has also been proposed to reserve a portion of this land for possible future official buildings; but Government apparently also had not prepared its plan for this lay-out: and a large portion of the ground has meantime been purchased by a neighbouring mission, thus interfering with the plans of both the intending purchasers! But I am informed that before this private purchase was made, particulars of this scheme had been submitted to Government, and even a third of the purchase-money deposited: so that mutual concessions are surely here desirable, to avoid discouragement to suburban development, which it is hard enough to foster in India. Such a strife of interests can only be avoided when sites are planned towards the maximum advantage of all concerned, and not left to the struggle of individual interests, and the chances and delays of daily life.

Old plans of this neighbourhood have been shown to me; but these so inaccurate as not to be clearly intelligible, even on the ground; and this to no less than six persons, who represented most, if not all, of the various interests concerned! The necessity of better site-plans is surely thus plain. With such materials as have become available, a plan for this area has now been drafted at the Madras practical class, which I trust may help matters onwards towards execution.

We are next conducted to visit the new Scavenger colony; again on standard lines; and planted in a wilderness of broken-ground with the usual spreading thickets of prickly-pears. Nowhere could this too inflexible plan appear at greater disadvantage. A large and healthy area, which might, with moderate labour, be put in order, and well-spaced for separate houses, is here largely spoiled, and left neglected.

But when we enter one or two of these humble cells—we cannot call them homes—we find again the poor women folk making, as ever, the best of it, and planting and watering, within their absurdly tiny but well-swept compounds, of 10 × 10, here a little row of plantains, and there a fruit-tree! Yet all round outside this tiny patch of garden lies the uncleared rubbish of the builders, for what builder ever clears away? That job is for my humbler caste of gardeners. Why exclude us altogether from this paradise of sanitation? These poor women, though constantly blamed—by those who have not fully and fairly observed them—for their untidiness, are still, as ever, the soul of India, and the salt of the earth. It is their ruling and organising authorities, their municipal government, with its large contracts and public works (which, as aforesaid, are not cleared after the building is done), who not only totally neglect to utilise the domestic instincts, the cleanly and orderly endeavours, of these poor women, but who thus limit, discourage, and depress them—some no doubt gravely; and these are then pointed at, for an undeserved criticism of all.

69

Let us put this criticism more clearly. Had one-third of this average expenditure per house, *i.e.*, say Rs. 100 instead of Rs. 300, been put in a Housing Bank, and to the credit of these people (and why not the women preferably ?) and they were then encouraged and wisely helped to set about the construction of their own homes, in their good, though old-fashioned, way of mud and thatch ; but with better planning and spacing, for gardens above all ; and with some guidance and leadership for house-building and for gardening successively—the result would have been satisfactory, healthy, fruitful and even beautiful. To this traditional rural village constructiveness, I trust and believe we shall soon return ; and with results which will satisfy the sanitarian, indeed far better than do the too urban and mechanical methods into which he has been led by the tradition of military engineering, and away from that direct service and advancement of domestic life which is sanitation proper.

SALEM DISTRICT
SALEM TOWN

POPULATION

Old Divn. No.	Census of 1911		Census of 1901		Census of 1891.	Census of 1881
	No. of Houses	Population	No. of Houses	Population		
1	1250	7478	1264	8342		
2	1857	6101	1295	7929		
3	2084	10119	1787	11643		
4	1175	3114	867	4808		
5	931	3209	876	4872		
6	1083	5388	844	5433		
7	1042	4648	837	4781		
8	869	2657	771	4982		
9	1932	9387	2008	9530		
10	1492	7052	1007	8301		
Total	13715	59153	11556	70621	67710	59631

Reg: No. 1567
Copies 450

Helio-Zinco., Survey Office, Madras.
1915

SALEM TOWN

ARISIPALAYAM EXTENSION

(Signed) K. D SUBRAHMANYA AYYAR,
Municipal Secretary.
Salem.
8-3-15.

(Signed) P. GEDDES.
30-1-15.

Helio-Zinco., Survey Office, Madras.
1915

Reg: No. 1567/2

Copies 300+150

GUNTUR.*

I

In a general way, and so far as my necessarily limited observation goes, I cannot but warmly concur in the sanitary recommendations embodied in the "Inspection† notes" of my friend and travelling companion Dr. Matthew, Deputy Sanitary Commissioner. The improvement of the water-supply is there rightly given the foremost place. His constructive recommendations given as to provisional improvements of the Black Tank supply, as to wells, etc, seem to me urgent and economical. Similarly as regards conservancy, latrines, dustbins and so on. There can be no doubt that these simple and inexpensive improvements would yield a rich return in the health and well-being of the town. It is the misfortune of cities that there has not as yet been organised a system of civic book-keeping, which would show the profitableness of thus diminishing waste of matter as dirt, and the deterioration of life and its social efficiency and productiveness which dirt involves; but the general principle of such social finance is surely becoming clear. This is gradually becoming plain to the more intelligent minority of every town; and I could even point to cities in which the majority have grasped this, and with little delay after their Councils have taken courage to act upon it.

II

We come now to the urgent problems of town-planning, of suburban extension and of central improvement.

First the main extension—that of Brodiepet, in which long delays have arisen in course of prolonged correspondence between the municipality, the Government and the proprietors. Our town-planning problem here is not, in a legal spirit, to enquire into what may be, or have been, the exact rights and wrongs of the respective parties; it is to consider what now (letting bygones be bygones) may be the simplest and least wasteful way of dealing with this area *i.e.*, some way which may admit of speedily proceeding with the needed dwellings, yet these with due amenity of surroundings, and sufficiency of access and with minimum injury to existing interests all round. Still we can best understand the situation by briefly considering its origins.

There is in this neighbourhood an unusually successful example of later nineteenth century European town-planning, in the large suburb of Arundelpet, on the east side of the main road running north-west into the country. On the opposite side of this road, it would have been easy to go on in the same way. A beginning towards this was actually made, by laying out the Taluk court, at first on lines strictly parallel to those of Arundelpet, as old plans show. But unluckily, in the subsequent extension of these buildings by the addition of prison cells, etc., a new piece of ground was taken in, with broader frontage towards the main road, and with its southern boundary no longer at right angles to this, so destroying the line parallel to Arundelpet. North of this, and up to the water-works, a large piece of land was next purchased for a mission and its college. Along the main road nearer town, what was till lately a private property (though recently purchased by the municipality) occupied the greater part of the remaining frontage south of Taluk court. In all these ways the westward continuation of Arundelpet was interfered with: in fact, this appears practically to have fallen out of view and been forgotten, and by all concerned.

Moreover, a new datum line, tending to influence all subsequent developments, was afforded by the railway line, which runs east and west some distance south of the Taluk court. Immediately south of the railway stand three large public buildings in their spacious compounds—Law-Courts, Police office and Collector's office, themselves reached by a road parallel to the railway. The level crossing of the main road from Arundelpet meets this road to eastward, but this is somewhat roundabout. The idea thus naturally presents itself (and with especial force when we place ourselves at these public offices), why not get from them directly across

* For maps please see after page 69 *infra*.

† Recorded in G.O. 1623 M., dated 26th August 1914.

(or under?) the railway northward? yet even without this, and with the present road and crossing, why not develop the open land between the railway and the Taluk court, etc. for bungalows, etc., for the lawyers, officials and clerks attending these various public buildings?

Towards this purpose an association was formed; a large portion of this land, back from main road, but with an access from it, was purchased and planned out in streets. Its lots were largely or at least partially sold, and even a few of them built upon, although development has been delayed; I take it partly by the absence of the direct road above desiderated over the railway from the offices.

The municipal authorities had more or less accepted this new suburb with its lay-out; as their beginning of metalling of its main east and west avenue, parallel to the railway, remains to show. They have also since taken up for development the remaining site, south of the Taluk court and next the main road, and even sold it in lots to various purchasers.

But when these plots are shown on the general plan, the awkwardness of the resultant lay-out of the whole neighbourhood has become apparent to all concerned.

The Government, which is asked to confirm these municipal sales, realises not only that the municipal scheme is a too limited one, for want of the private ground to the south-east next the main road, but that the original scheme of orderly planning on lines continuous with those of Arundelpet is thus being made impossible: and it hence delays to confirm the sales.

The municipality whose well-meant effort is thus arrested has rightly sought to improve its deficient accesses from and to the main road by purchasing the gardens fronting it to the south-east and next its present cart-stand. But it has not thereby improved its plan, which still fails by obliquity to the main road and to the suburb alike.

Since the planning of this suburb is so much open to criticism, the suggestion arises, from various quarters—Must not this be replanned even now on the lines of Arundelpet—despite its present lay-out and even its existing houses?

This sweeping proposal has however new disadvantages. Besides expense and trouble, difficulty and delay, there would be demolition of new existing houses; and, worst of all, a resultant embitterment and discouragement, which would put back the development of this suburb and of others as well. Moreover, the awkwardness of the whole planning would thus only be shifted, from the main road rendered more symmetrical, to the larger property originally planned on lines given by the railway. A really orderly plan would not thus result.

After careful and repeated study—upon the ground, as well as upon the plans, I submit that the simplest solution, one which inflicts least injury to the various interests concerned, and offers the best permanent result, alike in excesses and aspects, is that broadly suggested upon the sketch-plan * submitted. This will serve at any rate as a basis for discussion among the various parties concerned; and with their respective criticisms (and suggested emendations, if any) a precise plan can be prepared.

The construction of the road I have above recommended, from the office road across the railway northward, has been long under discussion. I understand that the objections of the railway to another crossing may be or have been got over (but in passing I may enquire whether an under-crossing would not be preferable to all parties, at least if its drainage be practicable without undue expense). A further difficulty I understand has been raised by the various Public offices, as disturbing their privacy; but a first-class Police office can surely be trusted to keep order upon a road passing it. This road would no doubt benefit the group who have purchased the strip of land north of the railway and enhance the value of the plots they have sold to individuals, or may yet sell. But I see no objection to this. For it is the function of the planner, as of the road-making authorities, so to lay out communications as to encourage the formation of good suburbs and their appreciation in value also; and the more it does this, and in all possible directions, the better for the community: and for municipal taxation as well.

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* For a plan of Brodiepeta please see second map after page 69 *infra*.

I have therefore indicated this road upon the draft plan, as running northward to meet the main east and west avenue already laid out by the group controlling this incipient suburb.

But beyond this, it should be continued northward, not merely to serve the remaining portion of this suburb, but up to near the mission boundary. This deflects it eastwards, but again it should turn northwards, through the present fields and gardens, until it reaches the conduit of the water-works. Across this too it may in time be continued, until at length it meets the existing public road near the large cow-feeders village, which has been lately included within the municipal boundary.

This would be the north and south arterial avenue for the enlarging Garden Suburb. Would it be in danger of bringing down general country traffic, through this suburb, across the railway, and past the public offices upon the road south of them? Reference to the general map of the town will show that this need not be feared; for the present Main Road, between Taluk court and Arundelpet, reaches the town far more directly.

After renewed reflections since my visit, I adhere to the solution suggested on plan as the most simple and economical solution, consistent with permanently satisfactory treatment, and future development of homes and communications, and with minimum disturbance to all concerned.

For we leave the main road westwards by roads at right angles to it, and with their openings from and to this as nearly as possible in harmony with those of Arundelpet, all as shown on plan.

This undeniably involves confirming the view that the recent sales of the municipal property adjacent be not confirmed; but that this ground be replotted along with the two municipal additions to south-east afforded (*a*) by the new municipal purchase of the private garden, and (*b*) by the incorporation of their present cart-stand, which lies within the acute angle formed by the crossing of the Main Road and the Railway.

I may reasonably assume that a cart-stand in the neighbourhood is necessary and that a new site for this must accordingly somewhere be found. In planning out a new residential suburb one naturally recognises that a cart-stand is an impossible element of its frontage; and that it is not desirable even behind this. Yet if no other site for the cart-stand be available, I suppose the position (*b*) must be accepted: since the needs of man and beast in an industry so important to the community, and to railway communications also cannot be sacrificed to the amenity of (after all a small number) suburban dwellers; moreover, the cart-stand need not be in any way insanitary.

I have therefore shown it provisionally on the draft plan, in a position practically as convenient of access as heretofore, though no longer spoiling the valuable approach and frontage to the suburb. By planting its border as well as its centre with shade trees, which are in any case so necessary to its use and comfort, the amenity of the neighbouring houses and gardens will be protected; indeed the proximity of the cart-stand would gradually be almost forgotten, save by its actual users.

Of course if a location elsewhere be obtainable, so much the better. This might be on the opposite side of road between the railway and Arundelpet? Or south of railway altogether, as in the vacant triangle of ground to the west of Law Courts? This seems the best of all.

I therefore strongly recommend this latter course, and hope that the Government may be induced to consent to lease or sell this. For although this proposal may at first sight (or rather reading), seem to conflict with the amenity of the public buildings, a study of the plan will show that the distance is amply sufficient to protect the public offices from any noise or disturbance, while the necessary solid belt of shade trees will soon effectively conceal it.

We return now to the replotting of the ground south of Taluk office. As already said, it has to be fairly recognised by the Government that in the extension of this compound for the enlargement of the original buildings, their architect extended his

frontage too far south along the side of the main road, thus converting its original small rectangle, on the lines of Arundelpet, into a much larger trapezium, of which the new base along the road was quite incompatible with these. By thus forgetting the original town-planning scheme, and departing from it, the subsequent confusion has largely been brought about. Nor can this now be put right until this Taluk boundary be corrected.

I am glad to find a willingness to consider the possibilities of this correction, especially at present, when a further extension of the Taluk area is required (*a*) for Police Lines, east of the Main Court building, (*b*) for new cells, etc., south of it. By carrying the new southward boundary which is conditioned by this, in the way shown on my sketch plan, the whole requirements of the situation can be met.

If (1) this be admitted, and (2) the replotting of the municipal sites be approved, it remains only to express the conciliatory hope that every endeavour be made to abate the material disappointment of the purchasers of the sites not confirmed. Is it inevitable or just that a new auction be held, irrespective of them altogether? Taking into consideration their real hardships—that they have chosen their present sites in hopes of constructing homes upon them, have undertaken to pay the market price for these, and have since been involved in delays in no respect of their making—can they not be compensated by the offer of sites practically equivalent, and almost upon the same area; at any rate on condition of at once proceeding to build? The sketch plan shows how easily this can be accomplished, and almost (if not altogether) completely. Such adjustment may be difficult under existing legal regulations; unless indeed it be granted, as the plan shows, that these sites may be considered as practically upon the same places; but it is not incompatible with town-planning methods, nor surely with the improved legal regulations to which these everywhere give rise. Delays and discouragements to improvement are everywhere found to be most serious drawbacks to the future of suburban schemes; and I plead for reducing these, and as fully and speedily as may be. After all, building regulations and administration are for buildings' sake.

It will be observed on plan that the proposed new roads and avenues running west from the Main Ring Road do not *precisely* correspond with those of Arundelpet. To attempt this is quite unnecessary, the more since its planning is prodigal in road area to an extent quite beyond that of more recent garden suburb planning, with its economy of roads and their acreage and its corresponding economies (*a*) of outlay, (*b*) of upkeep and (*c*) of gain to gardens. Nor should all roads be of such comparatively equal breadth One Main Entrance avenue is shown broader than any of those of Arundelpet, but fewer roads in all. Mechanical symmetry would here be purchased far too dear; moreover, as houses rise and trees grow, the contrast of these two suburbs on each side of the main road will not be unpleasing.

While our new side-roads thus start at right angles from main road, they soon gently curve into the existing avenues of the older suburb, as originally planned. To prolong them obliquely to the railway would (*a*) entirely destroy the present planning of this area, (*b*) involve the spoiling of existing homes and (3) would give a far less satisfactory result when done.

As regards the widening of the main avenue, two or three existing houses already interfere with this: but to demolish them would do far more harm than good. The moderate paring back of their frontages to the road is sufficient at any rate in every case but one, that already close to the north side of the avenue. Even of this, the utmost should be to remove the present verandah entrance: undoubtedly an injury to the property, for which compensation may fairly be paid. (In fact a new side entrance may be required; if so, compensation might justly include the cost of this.)

It has been suggested that the present side roads leading north and south from this east and west avenue should also be widened from 24 to 36 feet, but in view of the very moderate traffic required for roads of only four or five houses on each side I see no necessity for this. In Hampstead or other European garden suburbs such a road as that laid down is considered (and found) ample for all requirements. By all means however let the municipality erect a building line along these side-thoroughfares just as it does along the main one and so preclude any

house from coming up to the road boundary. If this building line be kept say 24 feet from middle of road, *i.e.*, 12 feet back from the present boundary of the lots, the houses of the road will range at least 48 feet apart; and trees and flowering shrubs will be planted between the houses and the roadway.

Conservancy lanes too have been suggested at the backs of houses and down the middle of each block. But were these accepted by the proprietors, and the main roads also widened, as the advocates of this older style of planning would propose, the remaining space, small at best, becomes too cramped to have any garden worth the name. These conservancy lanes moreover as I must constantly remind each municipality, are essentially imported from the old "By-law methods," which were introduced into English industrial towns at the dawn of sanitary and housing legislation about 1858–60; and it is to these by-laws that the prevalent dreariness, and the cramped little backyards of later industrial towns have been so largely due. It is not yet sufficiently realized in Indian Cities, that the Town-Planning Act of 1910 is the expression of that later and larger view of sanitation which sees that garden space available around the home is of incomparably greater value, to health and amenity alike, than is the compression of it by a vast and costly network of unnecessarily wide and numerous streets and sanitary lanes, the squalid trackways of an administrative desert.

Where old houses are continously built into streets, no one forgets that caste feelings and sanitary conditions concur in providing conservancy accesses behind the houses. But where new and separate houses, villas and bungalows are each to stand in their own grounds, as exclusively here, the brief daily passages of the sweeper's cart should be frankly along the main thoroughfare; though served by a minor side exit, apart from the main entrance. Is this too much in the public eye? The disadvantage is well compensated for by the higher standard of cleanliness which this involves. Do not only common sense, but the weight of experience, go to show that if we specialise a whole road-system for ordure, it falls more or less rapidly, but steadily and surely, to the level of its purpose? While, when we put our sweepers on the main thoroughfare, their methods and standards rise with this, instead of falling. In the mistaken interest of public health such conservancy lanes were established, and of course, with the best intentions: but they have proved a failure in Europe, and with the higher standards now becoming dominant, they are no longer thought of in new garden suburbs anywhere. Even where suburb planners now make narrow lanes, they are fit for general circulation. Often indeed, they are made attractive, as Hampstead shows.

Controversy has arisen on the subject of the road immediately north of and parallel to the Railway lines, and various suggestions lie before me, ranging from a 60 feet avenue to an 8 feet lane! Which are we to choose? The answer is not one of abstract symmetry, but of practical need. What size of road is actually required? Who is to use this road? Are there any houses upon it? Not one: all are served by the north and south roads from central avenue, and their vehicles have turning room without this. But, if so, who is to pay for this road—the Municipality? the adjacent proprietors? the building estate? Will not each and all be as reluctant as would be the railway itself and for one and the same reason—"We have no use for it." Under these circumstances the wide avenue certainly cannot be maintained —not even if it were possible (which we may be sure it is not) to make the railway pay their half of it, and no one wishes either to walk or drive alongside of a railway. Let us persuade the railway by all means, if we can, to plant a good row of trees or shrubs along its own boundary; but immediately north of this the building estate can do for itself. In Hampstead this would be an 8 ft. lane: but here I suppose it will still be made as planned originally, at 24—but for little use. What is really required from the railway is the more important concession—that of a crossing.

So much then for Brodiepet

III

Cloth bazaar quarters—Proposed improvements.

I have studied this difficult area with no less care than the preceding one; indeed with four or five long perambulations during my days in Guntūr; and have since worked on the plans as well.

The scheme has two aspects, here fairly distinct, which I may call (A) external and (B) internal. The first concerns the widening of the bazaar, the second the lanes and dwellings within.

A. This widening, is primarily with the view of relieving ordinary traffic congestion; especially along these streets which are also main thoroughfares through the city; but also with a view to abating the special congestion at the times of procession of Hindu and Muhammadan festivals.

B. The *Internal proposals* are of new thoroughfares to "relieve congestion" behind the present bazaar streets, partly by the widening of old lanes, but largely by new cuts through densely built up quarters.

The first proposal, of widening the Bazaar street, I am compelled, after full consideration, to discourage, as impracticably costly, and as injurious to traders and purchasers alike. The arguments employed in my recent "Report * on Salem" with regard to the destruction of a far more moderate number of shops, apply here with tenfold greater force, since the whole side of a long and busy street is here demolished.

For relief of the new congestion which would thus be created behind the present frontages, no adequate reconstruction plan has been prepared. Were this drawn, and the cost then estimated, I am convinced that this will be realised as totally prohibitive; and by municipality and Government alike.

What then can be done?

First as regards the present thoroughfare. As usual the street teems with minor encroachments. Almost all along the length of the street some little gains can be obtained to the width of thoroughfare by pressing these encroachments back as far as may be possible, without undue hardship to shop-keepers or cost to municipality. On processional occasions every foot thus gained is of great value, and additional safety also.

Second: as regards the need of wide through communications, I am of opinion that it will be found far more economical, and more improving to the town, as well as more satisfactory for this business street, to leave it as it is (save for abated encroachments as above) and, by and by, to cut a new street altogether, more or less parallel to this, and at sufficient distance to northward. But this also should not be undertaken rashly, *i.e.*, separately: but as part of a general scheme of town-planning and extension. This large subject my short stay, of pressing occupation with specific problems, does not entitle me to enter into.

The widening of the small north and south street to the eastward has also been proposed, and even the consent of proprietors has been given under certain conditions. But when we enter their houses, and investigate these conditions, we see that their letter of agreement sent to the Corporation, can only have been signed in neighbourly good will; and without realising the practical impossibility of rebuilding their house fronts habitably, with sites thus narrowed.

Coming now to the interior lanes, I find the new streets too costly and even the widenings unnecessarily great, in short too much demolition and unnecessary expenditure. I have suggested on plan a far simpler widening, of a few of the lanes, with formation (*a*) of a small but pleasant and comparatively airy interior square; as also (*b*) of an exterior square, near the public fountain, at the south-east angle of the whole Car Street rectangle.

The principle here recommended is simply that of such moderate widening of lanes, etc., as the detailed study of the place and its plan affords, the "conservative surgery" of which detailed illustrations have been given in others of this series of reports.

The large sum estimated for these excessive improvements may thus very greatly be reduced; and with advantage alike to shop-keepers without and the householders within. Yet with a fraction of this total estimate a substantial improvement of local health may be assured The balance of this large estimate, used with similar economy as regards interior lanes and areas, will be found sufficient to sanify a very

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* Page 57 *supra*.

MAP
showing
BRODIEPET & PROPOSED EXTN.
GUNTUR
Scale 1 Inch = 264 Feet
N
TANK
KORITEPADU
RING ROAD
Site for Cattle depot.
70 FEET WIDE
60'x35' PLOTS
Sita padukam
70 FEET WIDE
Donka
Meat market
18 Conduit
Water works
Pumping stati
Service reservoir
Stables
Kotamrazu
Venkatakrishnaya's
GARDEN
Chintapalli
Ranigaru's
GARDEN
Centre line
Public park
70
Donka
ET WIDE

70 FEET WIDE
Sita padukam
Donka
Meat market
Water works
Pumping stat
18 Conduit
Service reservoir
Centre line
Public park
Kotamrazu Venkatakrishnaya's GARDEN
Chintapalli Ranigaru's GARDEN
Stables
PARK ROAD 70 FEET WIDE
A. E. L. Mission Compound
ARUNDELPET
SITA PADUKAM ROAD 70 FEET WIDE
70 feet wide
School site
PLOTS 70X35
Taluk office
Site for the extension of Sub-Jail
30 feet wide
2·09 Acres
PARK
50 Feet wide Road
40 feet wide road
40 feet wide
Choultry
Vegetable market
Railway crossing
Railway compound
Cart Stand
Tomb
10 Feet foot-path
M. & S. M. Ry.
Masulipatam Bezwada Section
70 FEET WIDE
120X60 PLOTS
RING
OFFICE ROAD
Collector's office
Police office
Judge's court

Reg. No. 1637
Copies 300

(Signed) M. SUBBA ROW,
18-2-15.

Helio-Zinco., Survey Office, Madras.
1915.

great area of the old town; instead of being employed, through excessive demolitions in this part, to increase the congestion and resultant disease, the rentals and resultant poverty, of others.

When my rough suggestions left with the municipal authorities have been considered in detail, and the result incorporated upon a new plan, I believe the result, though no doubt disappointingly short of the heroic measures of the original plan, will be found sufficient for the most urgent needs, and suggestive of further improvements elsewhere. Yet as already said I am far from wishing to discourage larger planning: only let this be town-Planning: i.e., founded on a thorough study of the requirements of the whole town, and its general possibilities of expansion. This can then be proceeded with in detail, as urgency dictates, and resources allow.

58

COIMBATORE.*

I

In no city of India have I seen more evidence of activity, both as regards demolition of old properties and acquirement of new sites; though as yet, as elsewhere, the beginnings of actual rebuilding are disappointingly few. Nowhere have I seen such copious correspondence, or been faced by a more voluminous bulk of print amounting almost to volumes and requiring whole days of study. But happily most of this toil is unnecessary. The matter—as seems constantly forgotten—is one of real places, and of better plans for them: and after a couple of days' labour upon these, and some subsequent reflection and revisal, I am compelled to say that not only much of this correspondence, with the enormous amount of labour at both ends which it expresses, might have been saved, but also years of delays, with anxiety to the people before eviction, and overcrowding and deterioration afterwards: bad results not only to homes and families, but to the general business and prosperity of the town. No sharper instance can be given of the costly evils which the orderly procedure of town-planning, happily everywhere incipient, may henceforth avoid; as its conservative and its constructive sides become realised and kept in view together.

Despite all these great demolitions, and corresponding site-purchases, nothing beyond a most inadequate and incomplete town-map appears to exist; while the large sums already expended, and now desired, are also not adequately accounted for upon plans of any sufficient clearness. Governments and Town Councils alike maintain in such matters the ordinary standard of financial accuracy and audit; then why not maintain a no less high standard for the general planning, and for the draftsmanship upon which this whole vast mass of expenses, which they are recording and auditing, depends? Hence to raise the standard of this mapping and planning, with its required draftsmanship, is thus a serious problem, to which all parties concerned should without delay apply themselves; since focal to their whole material policy and expenditure, as well as to the record of it. The reward to all parties, in economy of time and money, of trouble and correspondence, will soon then be realized. Above all, with a better mapping of the town, and the better detailed planning this renders possible, there will come a great diminution of the many costly evils—at present so manifest—as of suspense, of displacement, and again of delay—to many homes and businesses, and thus to the whole community concerned.

My practical class for some training in plan-drawing and planning for surveyors and engineers, in connection with the cities and town-planning exhibition at Madras, has been only a beginning of this necessary improvement: yet the results of this will be found to justify further and continued attention to this long-standing cause of delay, confusion and waste throughout the cities.

II

Here for Coimbatore, the exhibition has been fortunate in receiving several maps prepared by Mr. J. K. Lancashire, I.C.S. First, a general map of the city; but unique, so far as my experience and enquiries yet go, as showing it (like an ordinary British or other motorist's map) as lying in its district, and with the main roads, railways and villages clearly marked down for a considerable distance around. The dry and wet lands with their tanks and streams are also indicated; so that here, as nowhere else in these inspections, a general and initial conception of the lie of the city has been obtained at the outset and kept in view. Second, a caste and occupation map of the city, full of interesting detail, and of obvious (and also less obvious) usefulness. Thirdly, a general plan of the town: but not simply the familiar document, with its town presented as afloat in empty space; but with its roads continued up to the edge of the map, and with all recent additions shown.

In short, here are the beginnings of the City Survey: and this, it cannot be too strongly insisted, is the necessary preliminary of all satisfactory town-planning whatsoever; while without this the town and its whole improvement business fall into the costly evils of which some have been already indicated.

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* For plans please see after page 78 *infra*.

Following upon these surveys of the past and the present, we are in a position to set about preparing the town-plan of the opening future. Towards some details of this, plans exist; but for showing these in their relations, the general town-plan has still to be drawn.

III

Busy men may and do say that they have "no time for such preliminaries"; but they will find these preliminaries to be essential moves of the game they have so long been failing successfully to play. Let them at any rate look at the ordinary plan of the town, as it stands, and read what it conveys. First the small original fort, its walls long gone, and its space now partly occupied by public buildings, and partly by congested houses. Then around this a regular and orderly rectangular street system, extending to a very considerable group of rectangles. Outside this—to south, east and north alike, that is, throughout the more recent town, there is little more than confusion; that of the collapse and oblivion of town-planning during the industrial and railway age, which has so disastrously affected the growth of well-nigh every modern Indian town as well as British ones. It is to this social period, of weltering material confusion, and of narrow individualism, with corresponding forgetfulness of the moral unity of the city, of its intellectual unity and order, and of its architectural and artistic past and future, that the self-styled "practical man" belongs, who "has no use for town-planning." Yet its clue will none the less before long help him to thread his way through his planless maze; bringing order into that confusion of insufficiently related details, which at present weighs down his business into over-work, and himself into drudgery.

With the arrest of town-planning, the village-labyrinth within each of the old city blocks has increased into the insanitary congestions we now-a-days suffer from. Outside too, in many directions, new village-confusions are growing up, so that new streets can only be made with difficulty and expense, if at all. Note even the large development of Government buildings and mission institutions to the eastward: as essentially another village, for though healthy enough individually and collectively, thanks to their compounds, they have not been laid out with any considerations of town-planning, and thus further limit this.

We next come in to the railway; here as everywhere, with only level crossings and too few of them. Note this ill-planned barrier; one destined to expand also with traffic, and thus still further crowd and crush upon the city. Beyond this, east of the railway, we have an area, as vast as the old town itself, devoted partly to public buildings—among which the departure of the Agricultural and Forest departments to their new country abodes may perhaps yield some needed space to the town, or even to the railway—but mainly to a scattered group of some three dozen or so compounds, each clipped out of the land-map haphazard, of any shape and size, in the usual wasteful and practically planless way so common throughout Cantonment Areas, and still more in those treated by the Public Works Department.

To the east then the town's expansion is practically barred; to the south, by vast tanks; to the west partially also; the main expansion must thus be northward. The municipality is to be congratulated on realising this, and on acquiring large and suitable tracts of ground for the future accordingly. For access to these, however, the present road-system is insufficient: the general town-planning of this whole northward area should therefore be proceeded with; and not merely the piecemeal lay-out, here and there, of some group of dwellings like the chucklers' settlement, or the weavers' quarters, which are the latest (but in every sense the poorest) features of new Coimbatore.

IV

Before visiting these extension sites, however, we are taken over the clearances; first, that of the Old Bazaar, then another westwards. Each is an enormous artificial desert lying unbuilt, it seems for years past; while the municipality fails to prepare the plan it should have had clearly settled before it demolished anything. Of course one cannot now see even photographs, which should always be made and kept of old buildings before removal. But from an inspection of what remains, still undemolished, but condemned and awaiting execution as "insanitary quarters,"

there is much ground for suspecting, as I frankly do, that these demolitions were in great part immoderate, that is unnecessary. How then are they to be explained? First by plague-panic; but added to this the methods of an erroneous sanitation, with its sweeping destruction—instead of the survey, general repair and widening of lanes—with of course selective removal, but of the worst houses and vacant lots only. This I have shown at many places to be sufficient; and I again find it so in the remaining condemned quarters here.

The inspection of Thorayar lanes, now selected for "improvement"—as this almost Prussian process of destruction is euphemistically termed—thoroughly confirms this first impression. I am compelled to recommend the thorough reconsideration by the municipality and by the Government of all that remains undestroyed in this area, and this no matter how far their financial arrangements may have gone towards its execution. For (unless I have entirely misunderstood the explanations repeatedly given me) the present proposals are unique in their costliness, I must even say, their wastefulness. First upon a rude plan, is shown a network of new streets and lanes cutting up all the area, at great expense. Yet next—by some before—but by others, *after*!—the completion of this scheme, a total and sweeping demolition of the whole block is advocated. I am told that a substantial Government grant is asked, and expected, for the first of these treatments; yet that a further new grant is also desired for the second! But if the first was sound, the second must be waste: while if the second be what is really necessary, why this first outlay at all? "As an experiment!" one gentleman tells me; and adds that its success is not anticipated. I do not hesitate to say that both these schemes are mistaken, and that they and their outlays, are in the main unnecessary. But, if so, they are not merely wasteful of public money; they are also disastrous to the neighbourhoods and impoverishing to their inhabitants—and thus to the town as a whole.

Of course, it now lies on me to justify this drastic criticism. I have accordingly studied the neighbourhood with the utmost time and intensity at my disposal; and have left my sketch-plan with the overseer for further development. It is true that no first or even second-class thoroughfares are here inserted; and that the old and irregular village network has been preserved, and only conservatively improved. But there is a place for everything; as for cutting new streets and thoroughfares wherever they can be proved to be needed: but also surely for village lanes and small open spaces, where these can be shown to suffice. This condemned area lies within the outer net-work of communication streets of the town; and these amply suffice for all its larger and external requirements. Within these large streets there lies, what is still substantially a village, the homes of quiet and simple people, without need of larger communication requirements. Town-planning of new streets and roads is thus not in the least needed here, but urgently so elsewhere. For these really necessary streets and roads, let the Government and the municipality reserve their (after all very limited) funds.

But is the sanitation of the Thorayar quarter to be overlooked? Far from it. My plan shows—what no previous one has done—a complete attention to sanitation, that of each and every one of the great majority of houses I advise to leave standing in this area: and it is on this ground, that so few houses need be demolished. Although the expense of my scheme is so small, the result to the public health will soon be found greater than on destructive methods, with their invariable results of overcrowding elsewhere.

A further difficulty, however, here arises. I am told that because (1) Government has some time back authorized the scheme of new streets cut through this region, and that (2) part of this work has been executed, therefore (3) the whole must now go on to completion; since the expenditure of that particular grant cannot now be modified. I venture however to enquire whether any such strict and Medo-Persian principle really exists? If, as I contend, this large "improvement" is on wrong and wasteful lines, then I am bound to have the courage of my opinions, and with all respect, to submit to Government, that to carry this plan out to the bitter end, merely because at one time it signed it, will be continuing financial waste and civic damage as well as discouraging better sanitation and planning. There is still time to save part of the money and to stop unnecessary demolitions; hence surely no

regard for the consistency of past correspondence between Government and municipality need prevent both parties from now doing this, especially now that approximately amended plans lie before them.

V

We now go to the Kempatti colony where a moderate number of new houses have actually been built, all on plots 60 × 30. The house-plan itself is a fairly good one, of the usual type; and though the rooms incline to be too small, there is habitable space for a working family. Unfortunately however, the first new house we enter contains not only its owner and his family, but has rooms sub-let to no less than three other tenants! So here we have new overcrowding at the very outset. This state of things is no doubt very discouraging to the ardent sanitary reformer; and he falls back readily, for a simple and self-satisfying explanation, upon the inherent perversity of these people, manifested in a positive desire, even a preference, for overcrowding, and in a determination to maintain it, in spite of all his efforts! Another too simple explanation is in his covetousness, his squalid acceptance of slum conditions himself, if only he may get rents from people a little poorer and so on. Such explanations enable our reformer lightly to pass over the tremendous demolitions of past years. Yet what else could possibly have happened than what we see—(*a*) the crowding of evicted families into the neighbouring slums still undemolished and also (*b*) that such as are lucky enough to find even a single room to let in a new house should take it and even outbid each other for it? The members of municipality and Government look closely into these facts of wasted improvements and of depressed life, as we are here doing; the present policy of "sanitary clearance", *before* re-building, cannot be maintained. This policy is an universal one; I know it from my youth in Edinburgh, in Paris, and a score of other cities, just as more recently, and too thoroughly, here in India. Everywhere we begin to recognise the fatal and calamitous consequences of such would-be sanitary efforts. We are told that "Regulations exist to prevent overcrowding; but people disobey them" Of course they do: what regulations can in practice be enforced while there are too few houses to go to? Illicit sub-letting is always easy; and who can blame it? After all people must have some kind of cover over their heads. A further regulation often is that only one-third, or even half, of the building site is to be occupied; but this also may be impracticable unless sites are correspondingly enlarged. On the frequent size of lots, houses so small would be useless.

VI

Another criticism. Here in Coimbatore, as in other cities, which despite all their faults are still beautiful exceedingly, with noble palms and other trees, even in crowded quarters no provision whatsoever is being made for gardens. The very opposite. A definite provision exists for the exclusion of gardens: since the whole of each new site is to be covered with bricks and mortar save only the little latrine-yard kept open by the bye-laws. I suspect that the authorities responsible for this plan may be fallible here as in other cases; and I begin accordingly to interrogate one or two of the bye-standers who are householders in this new area. I ask one after another "Why have you no garden?" "Would you like to have had one?" He says "Yes, I should; but I do not know how I can get it." I ask him "Why should you not buy that vacant site next your house, and use that for a garden?" He replies "Is it possible that I could get it?" I say "Why not ask the municipality for it at any rate?" "Would any others of you like gardens too? "Yes, we would; and there are many others." "Well, how much would you be able to pay for a garden?" "Would you pay the price of the site?" "How much was that?" "Rs. 70 was the price of our site." "Would you pay that?" "Yes."

All this is of course very interesting to a garden-maker; and as a little crowd is by this time gathering, I ask "How many of you here would like a garden?" The answer is "Everyone, provided we have the means of keeping it". "Well, how many householders are there here? and how many of you have the gardens?" Eight householders are present; and six of them say they would be willing to spend as much as Rs. 70; another who has not so much ready money, says he would pay by instalments, at low interest (or, if possible, at no interest!) One says he cannot. "Would you be willing to pay a rent?" "Yes." "Up to as much as As. 8 monthly for a good little garden?" "Yes."

Now, without expecting all these men to stand by what they have said, when they think it over, and look for the Rs. 70, and see how dear such a little garden would be at this high price, which I purposely named to keep down undue enthusiasm —they are at any rate keenly interested; this is evidenced by the shrewdness of the string of questions they put in turn. Thus they ask "Will the Municipal Council turn us out of our garden when they find some to take it to build a house"? "Will they compensate us"? "Will they enhance the rental of the gardens if we improve it"? "Or shall we have a permanent tenure, like that of our new house"?

Again, a poor man, who says he can neither purchase, nor pay instalments, nor even a weekly rent at present, says "if a garden could be put in order, and planted with plantains and cocoanuts, and its mud wall built, then I would begin to pay the rent, out of the produce." We next inquire of a neighbouring gardener who happens in the group, "How much would it cost to put a garden in order in this way"? and he answers "about Rs. 10." Here surely is an excellent investment for a wise Council, a helpful Government, a Housing Bank, or any combination of these! I am told that there is no caste difficulty here in Southern India between the work of a peasant and of a gardener; so that the simple avocations of a small garden are unobjectionable to any of the castes likely to be concerned.

We promised then for our part to submit this idea to the Town Council—that of allocating gardens next to house, or at any rate as near as possible; and asked the people to be meantime preparing to purchase these sites, to rent them, or rent-purchase them, as may be arranged.

Besides the bearing of such a garden-scheme on the health and the well-being of the people it has also the advantage of making the expansion of the town popular, instead of disliked as it generally is—often even detested. Little gardens often exist, even in such overcrowded areas as municipalities have too lightly been destroying. Why then should they exclude new gardens from their plans? Is any explanation discoverable for this omission? How much for instance, the limitations of the standard plan? If so, the limitations of its planning have in their turn to be explained; by importation of those bye-law methods which have standardised the dreariest centres of British industrialism. As town-planning advances, and the garden-city and garden-suburb movements with it, a choice of very different plans will soon abound.

Whether in an Indian city, or an Irish one, despite the local differences of poverty and overcrowding, their explanation is one and the same—the depression and deterioration of a peasant people deprived of their old contacts with mother earth. But if so, their health and prosperity is not to be renewed by standardising them into these mean streets, and sanitary lanes, of the "Servile State," so clearly described in Mr. Belloc's invaluably warning volume; but by evoking anew their constructive powers. First, in the building of their own homes; and these in a real, though urban, village. Secondly, in the tillage of little gardens which should as fully as possible be provided for these.

In summary then, the problem is simpler and less difficult than it looks. Here in the old towns, we have undeniable overcrowding in crooked, narrow old lanes; but the solution is not by removing people into yet more monotonous roads and lanes, with house spaces often of smaller average area and size than before, and with their overcrowding also too commonly increased as well. How then shall we proceed? First by widening out these old lanes, here and there as occasion affords, into homely little thoroughfares, opening now and then into pleasant squares, with tree and shrine; also of housing the comparatively few displaced people, by helping them to help themselves to new and better houses, and bigger gardens than before. One is asked, sometimes with sympathy, sometimes with a sneer, "How can this pay"?—and the question—though coming strangely from the authors or approvers of the most costly and unremunerative method of would-be city improvement on record—may readily be answered. First, with better town-planning, and the diminished waste of costly roads and more than proportional addition, sometimes even doubling, of site-space which this allows. Second, with Housing Bank; and, thirdly, whenever possible, with Homely Labour. With these, the present almost prohibitive expense of construction may be substantially lessened; yet the dwelling-space improved.

A garden costs little. Its trees and fruits, in three years at most, will outgrow the small extra cost of watering and yield profit in the real wages of improved dietary and resultant health, even if no produce be sold. Moreover here is a use for domestic water; also where a town's pure water-supply is deficient, there is a far better use for its many old and polluted wells than filling them up. A garden is the very best of Savings Banks, for only in a garden-bank can deposits may be continually made without money, yet in money's worth, of time and strength otherwise largely wasted. It means health for the worker, and health for the children, in air, in vegetables, in fruit; and it involves too at least an appreciable element of that disposal of organic waste matter which is such a large problem of every town; and again with corresponding saving to the municipality. Is the beginner too unskilled? Within a stone's throw of this Kempatty settlement are many excellent market-gardens, so that highly skilled examples are near at hand. In this way one might go on, meeting each and every objection which can be devised. But the simplest way is to appeal to good-will, and to ask for a trial.

I regret so long to labour this point; but when one goes north to the new chucklers' settlement at the opposite pole of the city, the dreary and almost penal aspect of this, despite the spacious streets of its gardenless lay-out, provokes fresh disappointment. Yet here small plots may still be granted; and since an old well seems available, why not allow these people their chance of redeeming as allotment gardens and orchards the adjacent waste now being given over to prickly pears?

VII

Beside this, we are shown a fine civic estate, actual and contemplated. On the west are 200 acres already purchased all the way up to the Agricultural and Forest colleges; and it is thus more than time to be thinking of planning these acres; their lay out must soon begin, in the wrong way or the right. Are gardens henceforth only to be the privilege of councillors and of officials, of wealthy vakils and merchants? Surely some of these, who realise what pleasure they have in their gardens, must feel increasingly willing to assure something of the same to their poorer fellow-citizens? Indeed the joy, the health, and the proportional economic return of a garden, are all far greater for the man who makes and tends it with his own hands, than for him who has one or a dozen gardeners.

In summary then all that the heart of garden-village-planner can desire, can before long be realised in Coimbatore; and the people thus gradually persuaded out to the suburbs, and for their good; instead of being driven out, for their evil.

We ask one of the Thorayars: "Why don't you go to the north side of the town; see what fine sites"? "Yes", he answers, "but I cannot live on air!" Could he not at any rate partly live upon a garden; and might not that change his and others' attitude to this whole extension scheme?

We then ask various municipal officials and business men whom we meet "Won't you remove to that fine new neighbourhood"? and they say "No." With a little further questioning, we discover that each of them lives within half a mile, indeed generally less, from his ordinary working-place; and that he thinks a whole mile, (and, still more, a whole extra mile) far too fatiguing for daily life, too great a strain especially for the return for the midday meal in the heat of the tropical summer. Here in fact is a main difficulty of Indian City-designing, which in my experience is usually overlooked by the vehicle-using classes, Indian and European alike, who of course think nothing of a mile or so; and even forgotten by architects and engineers: but if poorer people are to be settled in these suburbs, working-centres and bazaar-centres will also have to be planned for them near where they are to live. At present are not municipalities planning too much as if their city were like London, with numberless middle class people able and willing to come up, by train, tram or motor-bus, to their shops and offices? But such transit has to be very cheap before working people can use it: and in India walking must long remain the only mode of transit for the working men. Is it said that "many labourers walk far to their fields or to town"? I know it: but that is a not inconsiderable element in their poverty, through reduced working powers.

Yet I find it has been proposed to remove Muhammadan slaughterers from their slaughter-houses and from their mosques alike. I find Pallas and Parayas also proposed to be removed more than a mile away from their work; and I am not surprised that they refuse to go. Similarly I find not only coolies are to be taken away from their work, but cultivators from their fields and gardens, servants from near their masters' homes, traders from their shops, and so on. But this is not town-planning: beyond a very moderate distance it becomes town-spoiling. The problem, I admit, is a most difficult one: and it is at any rate a good sign that the weavers, whose work goes on within their homes, have first been looked after, though their housing still be poor. But for other, and less sedentary, trades and occupations, the problem is a very difficult one; and it requires time and thought, indeed prolonged study, with collaboration and criticism from every section of the community affected.

VIII

We have already discussed the western site next the Agricultural College. That proposed for acquirement to the north-east of the town has also been attentively visited. Assuming a sufficient water-supply to be available, the site seems altogether a promising one with no difficulties beyond that of distance, as excellent bungalows show, built by the very well-to-do Brahmin colony which has taken the initiative. Two points arise: first that of assuring the present under-crossing of the railway; and if possible, obtaining level crossings further north and south also: secondly, assuming that the policy of acquiring this land be approved—why not also take in the long triangular strip immediately *west* of the railway and traversed by the Mettupalayam road? Surely this is one of the places most likely for early and successful development, especially by the well-to-do.

We return once more to the city, to work at another of the proposed clearances. Again with the same result, conservative and economical, rather than destructive and costly. The proposed economy upon the whole town thus amounts to lakhs. Should the proposed Government grants for these destructive changes which I so strongly deprecate be withheld altogether? No; let them be used aright, for conservative sanitation over the whole deteriorated town area; in short for a general and civic uplift—a definite and general endeavour towards home, health and happiness, and thus resultant beauty. We find the people deeply discouraged by their uncertainty of tenure, sometimes demoralised by impending ejection. The municipal and sanitary authorities themselves under such circumstances become demoralised—even more neglectful than the people of whom they complain. Nowhere else in India have I seen such wretched and neglected drains along the middle of the lanes. To clean these up is surely a first duty, without waiting for elaborate drainage schemes, as if any drainage plan of future years were needed to show us how to-day's water can run down hill! Cleaning of wells is too much neglected: here I have seen even more floating dirt than elsewhere. In such cases, neither the woman who uses them, nor the sanitary inspector who occasionally looks ruefully into them, does or can do anything in the matter. But the toddy-drawer is the needed athlete, who would think little of descending and removing impurities; and to him a rope-ladder down a well would give easier work than do his trees. Or if his caste be an objection for Brahmin wells (though rottenness in wells should surely be more repugnant) can we not find a professional well-maker? Or a retired one, who is past heavy digging and building work, but is still able to get up and down a ladder?

The very frequent absence of the well-pulley, in this as in many other cities, is also severely to be commented on; since the strain upon a woman's strength, of the stooping upward pull upon her heavy jar, instead of the erect and downward haul upon the pulley—and also the positive danger to women with child from the former—must surely be obvious, even to the most apathetic. From the city of Broach the best of examples may here be taken.

IX

One or two other suggestions. First that of a representative spot, not hard to find, where the struggle of good house-wives against the neglect of their surroundings by the authorities is most convincingly apparent. On the one side are pakka

houses, clean and tastefully decorated within, and well whitewashed without; yet, beside these some deteriorated homes. No wonder, for in the roads and vacant corners, are general squalor and confusion, ordure unremoved and sanitary bucket overflowing. To clean all this up, and do the like around, would cost but an inappreciable proportion of the lakhs which are asked for destroying the mass of such neighbourhoods. I submit that—at each festival and holiday for a twelvemonth—publicly to garland the best kept of the houses would in a twelvemonth have a far better effect upon the neighbourhood, than has serving any quantity of notices upon the weaker householders for the last dozen years. Their main fault, after all, lies but in conforming towards that low level of drainage, and of sanitation, to which they are left by the neglect of their municipal fathers.

I am told "the public are to blame for the dirt; see how they make an open-air latrine of the neighbouring bank?" But has any decent latrine been provided within moderate distance elsewhere? We fail to discover that; but a place for it, easily. Let this then be supplied; then this bank, filthy no longer, can be partly cleared away to give an open space, and partly left as an orderly terrace, upon which should be erected a shady verandah and pial, where children can gather and play; or from which the old folks in the evening can quietly survey the life of the little square below.

X

Next a more considerable improvement—that of the large clearance proposed to be devoted to the new dispensary, between Raja Street and Thomas Street. With people urgently needing sites for homes in convenient and central situations, the allocation of so large a clearance square to a small dispensary building is wasteful; indeed in the deepest sense insanitary, since maintaining overcrowding elsewhere instead of diminishing it. I notice also the great length of new sanitary lanes proposed upon this plan, and that they contain several times as much crookedness as any of my widenings of Thorayars' Lanes or the like, without their advantages. With this enormous length and expense of fencing and walling, these lanes are prodigally extravagant since used only from one side. Hence (if such a lane must exist), it would be far better to give up the ground of the irregular spaces, which determine the present angles upon the lanes, to any of the neighbours who would accept them, for their backyards or for gardens, and thus get the lanes straighter.

The Dispensary should not occupy the suggested situation. By rearranging this, as in the alternative * plan roughly drafted along with the Deputy Sanitary Commissioner, it will be seen (1) that the Dispensary and its servants' houses also are better placed; (2) that space is provided, both north and south of this, for a public garden, which is much needed, in such a crowded and central neighbourhood. The value of this garden, to the dispensary for its invalids, as well as to the public who would enter it from either of the two large streets, north and south, will I trust be realised.

One leaves Coimbatore with regret that this report should contain so much of fault-finding; though not without corresponding economies, and with constructive and reconstructive suggestions and at many points. So brief and busy a visit has not permitted the drafting of larger town-planning outlines; but it is clear that with (1) conservative improvement of the poorer quarters, (2) careful planning of the existing clearances in the interior of the city, and (3) of the new suburbs also, Coimbatore may readily enter upon a new period of civic progress, with public health and well-being rapidly increasing, in the old city and its new suburbs alike.

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* Attached herewith.

78A
62
COIMBATORE DISTRICT
COIMBATORE TOWN
Scale of Feet
1000 500 0 1000 2000 Feet
Sithaputhur
Narayanapuram
Puthur
Central Jail
No. 228
A N U P P A R A P A L A I Y A M
Pullakulam
Ramanathapuram
Marudur
WARD No. 9
WARD No. 1
WARD No. 2
WARD No. 3
WARD No. 5
WARD No. 8
No. 227 COIMBATORE
No. 221
THELUNGAPALAIYAM
K O M A R A P A L A I Y A M
No. 217
No. 227
COIMBATORE
No. 237
KUNIYAMUTTUR
Central Jail
New Brahmin Extn.
Toll Gate
Race Course Road
Avanashi Road
Palladam Road
Coimbatore Stn.
Municipal Hospital
Traveller's Bungalow
Valan Kulam
Periyakulam
Selva Chinthamani Kulam
Palla-Palaiyam
Distillery
To Madras
REFERENCE
Open spaces
Ward boundary
Insanitary areas
New extensions
Buildings
Rail road
Stream
Tank
Temple
Burial ground
POPULATION
1st Ward 11,870
2nd 7,137
3rd 6,832
4th 1,750
5th 2,817
6th 4,109
7th 7,442
8th 11,956
9th 6,182

Reg. No. 1628

PLAN
Showing the land proposed for acquisition
by
PROFESSOR GEDDES in THORAIYARS' BLOCK,
COIMBATORE

78B 63

Reg: No. 1609
Copies 300

Helio-Zinco., Survey Office, Madras.
1915

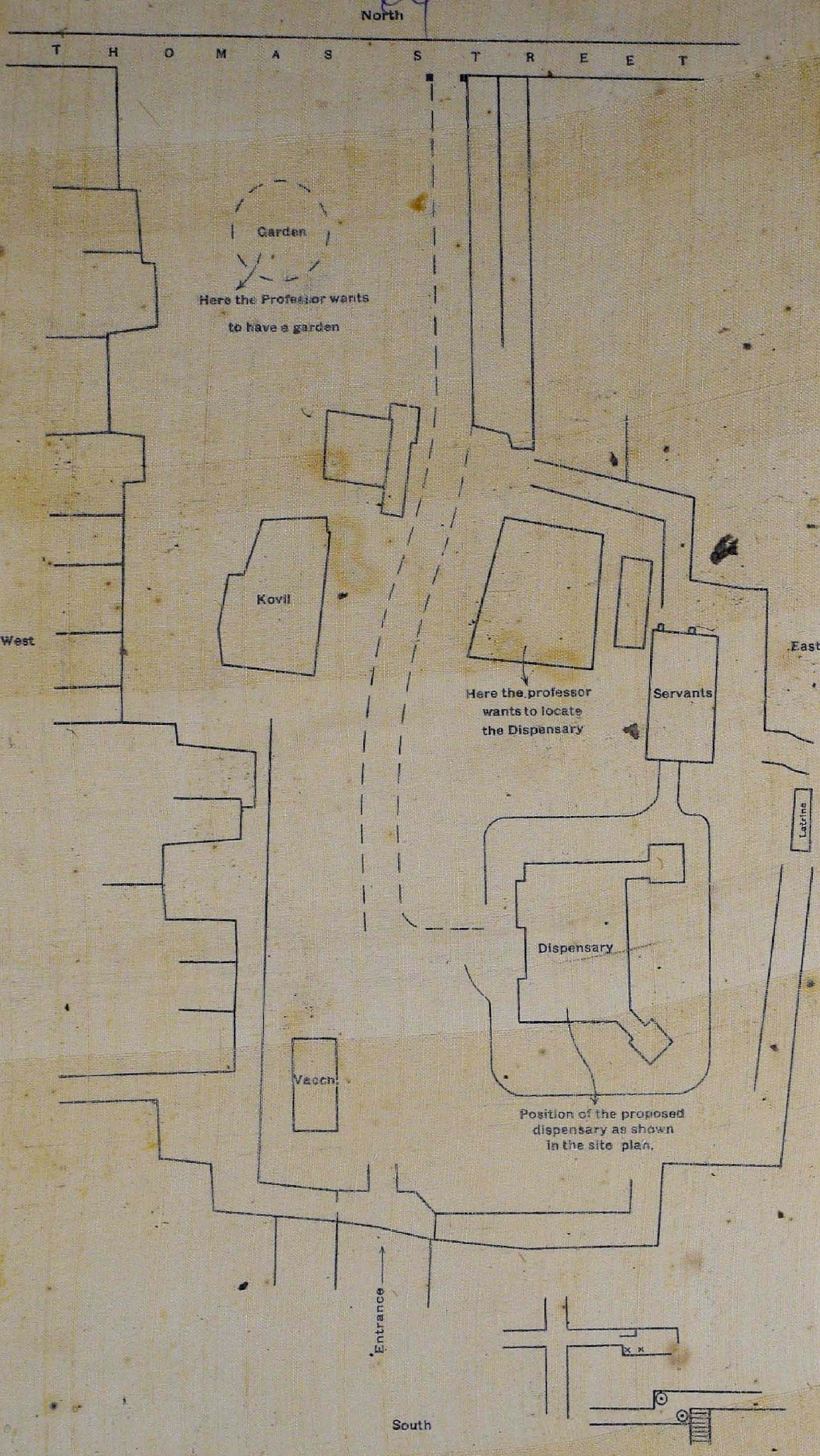
78C

63

COIMBATORE

Plan of an alternative site for a dispensary

64



Reg: No. 1610
Copies 300

Helio-Zinco., Survey Office, Madras.
1915

65

MADURA.*

I

My impressions of Madura have gradually disengaged themselves from an active inspection in detail: hence at the outset of this summary I may best conveniently follow the same order.

Our first visit was to Ponnagaram, a site of 13½ acres lately acquired for the benefit of people evicted by clearances, more particularly the fishermen of the Minkara block demolished last year. The ground has been taken from paddy cultivation, and raised several feet; and has thus been doubly expensive; while the lay-out has the frequent defect of an excessive road and lane system, with corresponding narrowing of plots, though these may still be too large for poor purchasers, who are not coming forward. A more economical replanning of this whole area was of course suggested; and this has since been attended to, more on garden village lines, with the engineer, in the recent practical class at Madras.

In the foreground is a school, new building, on standard plan; to this I see no objection, as regards the building itself. But the play-ground is very limited; and there is no school garden at all. The explanation is given me that "this is an elementary school, and the Government does not insist upon a garden." But I would here respectfully refer the Government and the municipal authorities, to the experience of France and Germany, of America and Russia alike; and (though last in this matter) to an increasing degree that of the British Isles also. In every case where the garden is sympathetically kept—*i.e.*, with and for the children, and as far as possible by them—the educational result is found to compare favourably with that from any other improvement—material or æsthetic, hygienic or intellectual, economic or moral—which can be named as having taken place in education in our times: nor is this to be wondered at, since a school garden offers peculiarly all these six elements of life and education, vitally united into one.

I plead then for a practical test of this large claim here. The ground can still easily be allotted.

Looking over the space allotted to this new suburb, one is struck by the enormous prominence of new latrines defacing its foreground. These, it appears, have been arranged at the back of the existing slum of cotton operatives in the immediate neighbourhood: but evidently without any reflection as to their foreground effect, in seriously diminishing the attractiveness of the proposed new suburb to its purchasers of a more prosperous class. In short, here as elsewhere, people work at each point on a partial plan, without bringing these together, or comparing them with the town's plan.

Approaching this slum region we find the latrines are not yet in use; but beside them a dismal expanse of mudholes, with wandering and wallowing swine; a loathsomeness unsurpassed in my large experience of filthy and neglected quarters. I am told that a notice has been served on the proprietor, and this six months ago—but I venture to deprecate such delay; first in serving it, and now in enforcing it. Entering the village we find it bad enough, though hardly deserving so neglected an approach. The huts are the most crowded and the smallest I have seen: worse even than in Bombay; while rents for this wretched accommodation are apparently even more

* For maps please see after page 92.

exorbitant. I am told the population is here from 900 to 1,000 and more per acre: yet there are vacant sites around, still unutilised: enough to afford a substantial relief to this great population. So I ask—Why were these people not extended upon this Ponnagaram block? Where are they ever to extend, if this site be now all handed over to fresh new-comers, from more distant parts of the city? I am told of course that such building land is too dear for these poor people; and this not merely by reason of its old cultivation value *plus* new reclamation cost, but also because of the extreme demand for houses, which encourages owners to hold up land still longer. I submit that this is where this site, of city property, should have come in useful. I point out how this element of exorbitancy can be dealt with, by limiting population per acre; but all the usual objections are made to this, and no wonder; for it is not in Madura only that people still need to read, and re-read, digest and apply Raymond Unwin's "Nothing Gained by Overcrowding".*

Eastwards along the main thoroughfare, we next come to a second group of huts and slums, scarcely less miserable than the last. A new cotton mill is also being built, with its promise of further congestion, and this is apparently also as yet being left totally unprovided for. Yet some vacant dry sites exist; in fact here so dry as to be covered with prickly-pear. Of this a councillor plaintively tells me that "the city authorities cut it down and burnt it two or three years ago; yet it has all grown up again!" I offer him simple and natural explanations:—that this is because they planted nothing else; that living nature abhors a vacuum, and that she does not approve, or even permit, the blank administrative deserts so dear (in every sense) to administrations;—and remind him of an old story which tells how people who lost the simplicity of mind and effort necessary for maintaining their garden paradise were cast out from it, and among thorns. But all these explanations seem to my interlocutor perplexing, and I suppose "unpractical": but so does each and every other biological or horticultural, evolutionary or vital idea, to the minds still unemancipated from the mechanical and monetary education from which we all have suffered.

II

Next a yet more depressing experience. We look for the great "Krishnarayar Teppakulam" of our map, and find it gone—all filled up and sanded over. Another administrative desert. Two or three children are in one corner, at less healthy and wholesome play than they would have had beside the water; but the main feature is afforded by the stacks of drain-pipes for a coming scheme. It is explained to me that the "inlet was lost", or "the outlet blocked", or *vice versâ*, or both. But when one asks—How it is that water and drainage engineers, who are in power to deal with the whole city, could not have dealt with this one pool, only a furlong or so from the river? There is no reply. But if this dreary failure, this costly destructiveness, be the last word of recent engineering and sanitation in Madura, I cannot but enquire—How then was this once splendid tank kept useful for centuries? and why should any contemporary failure or discouragement have been allowed to destroy it, to the disgrace of sanitation, and little to the credit of engineering either?

Following up this enquiry, we are taken to the surviving Teppakulam, west of the great temple and north of that of Perumal. Here is a nobly-designed square with splendidly stepped sides: but we are told "the water is leaking, the inlet and the outlet are out of order: so we may have to fill it up". In short, destruction is here also proposed; though surely at far greater expense than that of cleansing outlet and inlet? In any case, one asks—What is the use of human hands—not to speak of engineering brains, and municipal bodies—if not to cleanse and renew and keep in order a noble monument like this?—a public amenity and a hygienic resource alike of the very greatest value. Besides strongly protesting against such public mischief, and this in the name not only of old and historic sanitation, but that of the future as well—I suggest that a small sinking fund should be provided for the restoration of the other tank also, as having been destroyed in a mere transient conjunction of sanitarian pessimism with engineering failure and civic weakness.

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* Taraporevalla, Bookseller, Medows Street, Bombay (*Four annas*).

For what these have destroyed, a better co-operation of sanitarian vigour and civic energy will yet surely restore. There have been far greater losses in Belgian cities, but within half a generation they will be mended.

Before leaving this tank (we trust not to be destroyed) it is interesting to note the utilisation of this fine situation by a Catholic Mission Church, which stands to the tank much as a temple might have done. It is no small element of the appeal of temples in India, as of cathedrals in Europe, that all such sacred edifices are placed with due orientation to nature, and with due planning of the city around: and the loss of value and influence to religious buildings, eastern and western alike, from the total indifference to planning, which is characteristic of the individualism of the nineteenth century, and more especially of the railway age, is not yet fully realised. Yet this is not a sentimental matter merely, but a business one. Everyone knows that to display a shop, a bank or a public house at its respective strategic point is good business for it; and the same principle applies to each and every variety of public or sacred edifice. Even in these days, the contributors desire a fine building for their money: why not also a good and well-planned situation, like that of this church here?

III

We next visit other insanitary and congested areas: of these some 16 are coloured upon the map. For the area of complete destruction, still left unplanned, and as an uncleared desert—that of the Minkara block—some 120 families of fishermen were summarily expelled more than a year ago. Their natural reluctance, their delays, their hopes and protests were all overpowered, by two days of rapid destruction; for since the poor souls had no other quarters to go to, and thus naturally refused to move, their houses were literally pulled down about their ears.

It is by no mere accidental coincidence that this sort of destruction should be in progress in so many cities of India in these years. For this is practically synchronous with the widespread destruction of villages and town-quarters in the present European war. Recall also, for another instance, that the walls of Madura, with their 72 bastions of the old Poligars, were pulled down in 1870, the year which saw so many city walls thrown down in Europe; from those of Strassburg in war, to those of Florence by its own municipality in time of peace; and then consider whether, in east and west alike, the world-movements and the civic changes are not strangely akin in each generation. If so, a hopeful view opens before us also, for a better movement of town-planning and housing has assuredly come on in Europe, and cannot be much longer in reaching the second city of this great Presidency.

Return now to this Minkara block. It is again explained to me that its inhabitants were the perverse people, who were asked to go to Ponnagaram block, a mile off, but who would not: claiming that their fishing and fish-business must remain in or near its old neighbourhood. We learn too that they are Muhammadans, and that the offered new quarter has no mosque. Thus the localisation of industries on one hand, the segregation of castes and religions on the other, in short the two main characteristics of the Eastern City (more widely influential too than we commonly think, in Western ones) are here alike forgotten. In such ways the impression we have been accumulating, of the recent civic and administrative policy of Madura, becomes yet more depressing.

One is told that "the people are to blame"; "the citizens do not care for improvements." But such excuses only confirm our impression of their critics. In this first morning's round we have seen evidence to the contrary. North of the wretched cotton slum above described, a little temple, obviously for popular and humble use, has just been built; covered with new sculpture and gorgeous with colour. Beside the river and near a bathing ghat, we find a Brahman builder at work, setting up a new street for his fellow castemen: and with something of the regularity of their old tradition of Agraharam streets. Everywhere in the slums we see women toiling and sweeping, each struggling to maintain her poor little home above the (distinctly lower) level of municipal paving, draining and conservancy in her quarter. The fault is thus not mainly in the people of any class. With more of vital leadership, more of direct and vital touch, of municipal and central government with their real needs and aspirations, domestic and social, spiritual and artistic,

I have no fear but that the people of the cities will respond to improvement. The immediate problem is for us, the governing classes, to realise what their needed and desired improvements really are.

IV

We are next taken to the Uppukara block, *i.e.*, that one of the poor quarters, next threatened with "relief of congestion," and there we are shown a rough plan, with the usual gridiron of new thoroughfares, to be hacked through its old-world village life. Yet this sweeping and costly plan we find is not the original one; but is regarded as a moderate, and even economical substitute for one of total demolition, which was happily too expensive to obtain sanction or support from Government. It is not suggested that these new thoroughfares, to be made through this block, are in any way required for city communications: for these the streets outside are sufficient: the scheme is one of "sanitation" alone.

But the very first house we begin with, as doomed to speedy destruction, is as substantial, decent, and even pleasing, as one could wish to see. Why then its demolition? This is explained as for "straightening the new lane beside it". This new lane is not to be appreciably broader than the present one! Its one merit is to be about 16 degrees nearer the draftsman's straight line than at present. In short, we are to begin our "sanitary" improvement by destroying an excellent home, and squandering its value of Rs. 3,000 or more for the sole result of thereby inclining the present lane, practically without altering its breadth, from a position slightly oblique to the edge of our drawing board to one strictly parallel to the same. And similarly further up the lane.

How is such planning to be explained? I take it as a vivid illustration of "that principle of functional substitution," as it is called by evolutionists, which prevails in matters social as in physiology. Were this a question of a new conservancy lane or a new latrine,—the Via Sacra and Temple of the sanitary dispensation which originated such clearances—we could understand it. But draughtsmen care about as little for sanitation as do other members of the public: their prime interest, in copying a sanitarian's plan, is in its neat straight lines; and thus such rude sanitation gives place to an æsthetics yet more elementary; until it becomes, as here, a matter of doing puja to the straight lines of the drawing board and set squares.

What then is the solution of this case, and the treatment of the whole area? Leaving the good entrance house as it stands, it is enough merely to remove the almost valueless dilapidated rubbish behind it. But this has the immediate result of widening out the present crooked lane into a pleasant square; which looks spacious in contrast with the lanes, and is big enough to plant a tree in. On the opposite side of this entrance lane, and its square, are two vacant sites. Of these the destruction-plan takes no notice, as it might well have no money. But since the above clearance of the small slums for the new square will only come to Rs. 200—300 at most (instead of an expenditure of over Rs. 3,000 on the former scheme) we can easily afford to acquire these: moderate as their present value must be. For here is room to build two good houses to compensate for two of those we may have to destroy further on.

This opening of the game is a fortunate one; and it commends itself to the common sense of my companions. We work on together in this way hour after hour: gradually a new plan evolves: with as much new vacant space as the former plan gave us; but without any of that sweeping destruction, and that corresponding displacement of overcrowding to new quarters, which was threatened.

This sketch plan * has now been fully elaborated by the city engineer first after my departure and then at the practical class in Madras.

So far the material planning, but the value of the more conservative method does not end here. I had not at first realised that the people of this neighbourhood are not only all Muhammadans, but (as their petition against removal explains —a most pathetic, besides well-reasoned and convincing document, which it astonishes

* For this plan please see after page 92.

me was not more sympathetically considered—) a group of peculiar antiquity and closeness of kinship. These old ties of attachment between place and people, this web of social solidarity, this estimable civic unit, it has been seriously proposed, and almost sanctioned, irrevocably to destroy! Only after finishing my draft of the improvement plan, do I come out upon the main mosque of the neighbourhood, which of course should have been upon our plan, and used as our starting point as the nucleus of this whole village-grouping.

For Muhammadan quarters, if possible even more than those of Hindus, the principle of conservative surgery thus justifies itself. First as by far the more economical one, and even the more healthy also, since preventing overcrowding elsewhere. Second, as that demanded by every other consideration as well as the sanitary and the economic—from the aesthetic and the homely, to the moral and the religious, the civic as well as the historic. It is even the politic method: for by treating the people with this consideration, we should far more readily take them with us. True, even upon the conservative plan, a certain number—in this case eight families instead of about twenty times as many—will still have to be evicted. But it should be comparatively easy to compensate these few families, so as to enable them to find or build not less good homes at some near and convenient point to their mosque especially. This amount of disturbance can be faced by the commonsense of the community; it will even be softened by the good-will of the evicted, when they see the resultant improvement of their old neighbourhood, and have also better homes themselves. All will thus soon appreciate the resultant sanitation and general betterment.

How different from the present state of things would be a city in which such active co-operation should arise between citizens and council? And this towards real sanitary and economic improvement, freed from harsh and wasteful clearances and from the sullen resistance of the people to the increased congestion and the heightened rentals which are the main results of clearances to them.

So important is this indictment of this form of municipal policy that we must elaborate it. First, municipalities have for a long period neglected their poorer quarters, which have become insanitary accordingly, and congested more or less also. They begin to realize the need for sanitary improvement, and many attempts at improvement are made, but in too piecemeal a fashion. Still more inspections and inspectors are multiplied. Sooner or later, the inadequacy of both these endeavours is realised. "Something must be done." Hence we pass from these too weak and too purely critical endeavours to the opposite extreme, of sweeping demolition. This intensifies the old evils in new places, with new overcrowdings and with poverty intensified by heightened rents. Vast schemes of water-supply and of drainage, sometimes questionable or unsuccessful and always costly, are next set going. Sometimes these involve sweeping destructions, as of old wells and even tanks; too often even with delay of ordinary drainage repairs until the new drainage is forthcoming; thus giving the poorer citizens who have been overcrowded a further term of years of deterioration amid unremoved dirt. The whole process is thus becoming increasingly expensive, especially to a community overburdened by rising rents as well as by increasing taxes. Government doles are therefore sought for; and these are too largely wasted when given.

This is no doubt a strong indictment, but one which rests upon a much wider basis of observation than even of the cities of this Presidency, ample though the illustrations of it here have been. But, as we said above, generations and cities constantly fall together, or again begin to rise. The latter process is also beginning, for we are at the turn and struggle of the tides. There is a new policy incipient among cities everywhere, that of town-planning: and within this each and every interest—sanitary and economic, material and aesthetic, educational, moral and religious—begins to find its place. With this comes again its literal and material orientation, as well as its orientation in the moral and social sense—its place in a renewed civic harmony, its general acceptance and its economic success accordingly. Whereas every one of the schemes we have been destructively criticising, as one more disastrously mistaken and wasteful than another, and thus practically open to the bittgrest names—as of a fisherman's eviction scheme, a Moslem displacement

scheme, a Hindu tank-spoiling scheme, and so on—is a bad planning scheme. Why? because not one of them is a town-planning scheme. Schemes like these will soon hardly be believed to have existed, save only as bad dreams before awakening: as town-planning becomes better understood, and its problems are treated in relation to the city as a whole. In terms of this more general view of the city's needs we are able to improve the plans above criticised; and the work of our subsequent practical class in Madras has thus not been on mere matters of draughtsmanship; but of this as the notation of civics. As the human interest of each problem thus reappears, plans improve in draughtsmanship and in economy. I am pleased to be able to report that for no city among those I have studied have the plans I have criticised and sketched upon undergone more encouraging improvement than those in the hands of the engineer of Madura.

V

We may therefore leave this ungrateful task of exposing past failures or proposed ones, necessary though this has been towards arresting mistaken measures and improving upon them. Starting afresh, what is the main question? Plainly this: "How should we town-plan Madura?"

First of all, we must survey the city. The mode of approach of my own inspection visit, as described in the opening pages above, is here quite insufficient. The practical man rightly protests against the mere bookishness of the student or the doctrinaire, and so far rightly applies himself to the immediate meeting of each practical situation, as it arises. But is he not at present too much without any clear comprehension of what these practical situations really are?—so long as he is without sufficient observation and comprehension of their origins and causes, their interconnections, in short their general and practical place within the city.

To survey Madura, then, we set out another day, and start this time with the main monument of the city, its magnificent Temple; fortunately one which admits the European visitor with a hospitality almost unparallelled. We are fortunate too in having, in Mr. Subrahmanya Ayyar, a guide combining historic appreciation and religious feeling with the power of expressing knowledge and awakening sympathy, and a good citizen as well.

The central and dominant significance of the Temple is brought out first by the monumental Mantapam of Tirumala Naik, next by the great rectangle of car processions, the "Masi" streets, and by the general form of the ancient fortified city. Its walls and moat have given place to a range of new "Veli" streets—not quite the boulevards they might have been, but still good thoroughfares, airy and spacious. Outside these, to south and north-west respectively, there are some evidences of resumed town-planning; but now of monotonous and second-rate character borrowed from the bye-law streets of manufacturing towns. Beyond these there is little of the suburban village development which is often conspicuous around other cities, and the explanation of course is clear. The close proximity of wet cultivation is here, as in so many other places, a main difficulty; for this rapidly growing population of the town which should normally have sought and found outlet in suburban extensions has here been constantly repressed; in fact thrown back into the city. This again with the result of producing the large and numerous insanitary quarters tinted upon the municipal map, and with doubtless too many others, progressing in the same downward direction.

Yet here beside one of the great temples of the world we find one of its magnificent palaces—one which can compare with the masterpieces of Louis XIV. Indeed beyond this again we have in the Vandiyar Teppakulam, a third monument, up to the highest level of western magnificence. Can it be that here, in one of the most monumental of Indian cities, the creative spirit should have disappeared? Or has it not merely for the time fallen asleep? One modern constructive work there is which proves that we moderns are not architecturally incompetent—the fine bridge. This at present leads only to two or three villages, to the park, the club, the European quarter, but it should also soon link Old Madura with New.

VI

Before crossing the bridge, however, let us take fuller stock of the possibilities of Old Madura. But here we have no adequate plan, that of the municipality being coloured neatly indeed, but with a confusion of the topographical information, which we require, with mere property information, which should have been kept apart. For instance, to denote "dry land," "wet land," and "municipal extensions already sanctioned," by the same green colour, is obviously unnecessarily bewildering.

This is not made clearer by adding a few other tints to indicate varieties of future extension. We need then a new map of Madura tinted afresh, for topographical facts alone, and its whole neighbourhood for a distance, ample for possible extensions for many years to come, and with dry land and wet land perfectly and unmistakably clear, as well as roads and villages well beyond the municipal boundary.

Failing this adequate map to work on, our suggestions are necessarily provisional. Wet land and dry express a first beginning of contouring; but this should of course be carried further, in fact as thoroughly as may be. To note the exact height of dry land is obviously a condition of its health and drainage possibilities; and similarly to know the exact depth of wet lands, is to realise its difficulties, and to give guidance to the cheapest spots for heightening as building sites where the possible depth of water is least.

How important this matter of contouring is, is already plain. shown upon the map with its river banks largely uninhabited, for obvious reasons of swamp and flood. Is it not possible to redeem these vacant strips on both sides and for miles? Here is a problem requiring calculation from the engineer. The material for heightening is available in the sands of the river; and the sand-removal, from stream-bed to shore, can be effected on a large scale with economy and speed. The interest of the city's Water Trust in the stream bed must of course be respected; yet, not as one of those local barriers of absolute property. which too frequently enable one department of a public service to strangle its neighbours. It is plain that a river of this magnitude will soon replace all the sand we can take away. But if the heightening of the river-banks present no insuperable difficulty, why not also that of wet lands further inland, since rope-tramways and the like are readily fitted up and worked? Yet is so much elaborate filling up necessary? May not bands be erected to keep out the river? And further inland, may not existing watercourses be stopped, and wet land thus turned into dry? These of course depend upon the irrigation engineers, whose detailed report is thus urgent and indispensable to the town-planning of Madura.

VII

I was limited by lack of time from visiting the districts south of the city, particularly the growing suburb of Pasumalai, with its promising features of American High School, new Technical School, etc., albeit also with elements less inviting to present suburban development: not simply a "promising criminal settlement," but with fears of active cattle-lifters and blackmailers in practice a little further in the background.

In any case we are safe to enquire into the future planning of the Railway. Its enterprise has here been great; an area of over 100 acres having been taken up for development. I am told (rightly or wrongly ?) that this recently converted wet land is still unhealthy; and that the raising of its level is not yet sufficient. But a beginning of suburb-planning has been made; and I may so far offer my congratulations accordingly. Yet a question arises:—Is this large acreage all required for railway extensions, and for railway staff dwellings? May not part of it be applied so as to give some provision for further industrial development, as in the case of the Madura Mill, which is well-placed upon a siding? Yet there is another side to this. Since the workers of this Mill are largely in the frightful conditions of slum and overcrowding already commented on, would not the growth of industries, such as is at first suggested here, go on increasing the deterioration of the City? Hence is it not a far better alternative to plan out a new industrial suburb altogether?

I am convinced of this. Whether this new suburb should be north of the river or south of the town, I am not yet entitled to have any decided opinion, much less to advise: but plainly it must be one or the other; or possibly both;—one for cotton industries for instance, and one for others. Now in fact is the opportunity, a very great one, indeed twofold: (1) of making a new and model industrial town, (2) of also relieving the growing congestion and disease of the old city. As soon as the proposed Town-Planning Act can be got through, it will give the necessary powers, and after this all large industries should be refused sites within the present main area of the city. As in all town-planning schemes worthy of the name, their establishment should be provided for in a properly selected new suburban quarter: and this again should be carefully designed, with its railway facilities and its workers' garden villages.

VIII

Another area of possible extension is that along the Ramanadhapuram Road running eastwards near the south bank of the river. But this is a malarious district, hence deserted by the European colony, and needing corresponding improvement before it can become suitable for dwellings. Still, these sanitary measures should be faced, and this suburban plan should be proceeded with and in a comprehensive way. A beginning of this suburban extension is afforded by a long strip which has been of late years acquired by the municipality, between the Police headquarters near the junction of the main roads and the Madura East Railway Station, but is still unbuilt upon. The present raising of the land seems scarcely sufficient; and its planning should certainly be considered with reference to future possible developments upon a much larger extent of the neighbouring wet area.

IX

It is now time to cross to the north bank of the river; and to consider the possible extension of the City in relation to each and every one of the villages. But all are disappointingly limited by great tanks, and fertile and costly paddy fields—of course still more costly if we have to raise them. We need not here describe in detail our study of two of these villages: enough here that their planning has been set going. Apart from these, upon the main road running north-east, we find the possible sites for expansion being taken up wholesale, by new public offices, Law Courts, and other administrative buildings with promise of some provision for clerks' quarters, police, etc. The pressure upon the limited area of sites is here doubly enhanced by the coming in of the Rāmnād Law Court, etc., which need space comparable to that for Madura itself. Here however is surely an architectural and planning opportunity which should not be lost, *e.g.*, for the architectural grouping and planning together with a surely obvious convenience and economy to all concerned as well as added dignity.

X

Beyond this quarter again we come to the old race-course area, now classed as "Bungalow Poramboke." But this despite its fine elliptic thoroughfare, has not been planned, but only hacked up, into bungalow spaces, with as great waste of land and yet as poor effect when all is done, as one can see anywhere in India. So extreme is this twofold waste—first, this continued prodigality in sites and site-areas, in face of a civic site-famine; and second, this throwing away of architectural opportunities and possible effects, that a fuller criticism—one largely applicable in many other places than Madura—must be outspokenly made here.

Contrasted though is the congested confusion of old Bazaar towns with the immense extent and dignified isolation of cantonments and Government porambokes, the latter are also in their way examples of a kindred and contemporary lapse of town-planning. Late though it be to realise this, the planner's problem in each case is becoming clear. On the one hand we have in a large measure to maintain the populous and gregarious Indian type of village and town, yet abate its congestion; to lead it out into garden villages without, yet with more and more civic development

within. On the other hand we have to mitigate the Crusoe-like individualism of the too scattered and almost planless bungalow compounds and endeavour gradually to convert these into a true Garden City.

In every city where this criticism is made (and it has to be made in too many), the European is apt to feel some alarm: interference with a Brahmin or a Muhammadan colony would be nothing to meddling with a bungalow poramboke.

Yet there is no danger. As the Muhammadan should not be isolated from his mosque, nor the Brahmin from his temple, tank or river, so by all means let us continue to plan for the European community its spacious bungalow compounds, still reached by wide avenues as at present, and still surrounded by the gardens their residents rightly love. But not with quite so many acres of desert-compounds, so largely left to weeds and snakes, with ill-planted trees, between each one and its neighbour; and with fewer of vast gaps, and derelict patches, and spoiled corners. The general effect is too often of these, and as disconnected by their roads. It is not enough that these be wide; too often they are conspicuously deficient in that touch of order, skill and taste which we admire in continental cities. For lack of this their avenue character and boulevard outlay are too much wasted; and the park effects aimed at are more or less lost, or thrown away.

This criticism will be less liable to misunderstanding if it be re-introduced historically. From the early renaissance to near the end of the 18th century, there developed from Italy, but in each of the European countries more or less, a succession of examples of the stateliest planning, of palaces and mansions, with gardens and parks, avenues and forests, which was ever devised by the wealthy and governing classes of the western world, at least since before the fall of Rome. But the close of the 18th century—largely with the "Return to Nature" of which Rousseau was but the main exponent—partly in consequence of the eclipse of aristocratic tradition and taste which was involved by the coming in alike of the political and the industrial revolutions, and partly also by the direct agency of London-Chinese tea-merchants, a new style of gardening came in. This was the so-called "English" or "Landscape-Garden Style" in contrast to what had been commonly called the "Italian" style—though this Italian style was really to a great extent Oriental (Persian and Moghul) in its origins.

Stately avenues and classic gardens thus rapidly gave way before a new wave of romantic feeling, in which the castles and ruins of the Waverley novels, and the pagodas and irregular flower-gardens of China were strangely mingled; as Kew gardens show to this day. This new style, however, developed one or two masters, notably Repton and Brown (the latter remembered as "Capability Brown"). The irregular parks and winding avenues of modern English mansions and parks were then introduced, sometimes with undeniable effect, but often with conspicuous failure. Now in British cantonment or official areas, as in public parks at home, the successful effect is rare; the failure is frequent. For where landscape gardeners, who are practically landscape-painters on the greatest scale, that of landscape makers, fail so readily as they do, it is hardly to be expected that the artisan gardener, or even the botanic gardener from Kew or Edinburgh, should succeed. His very mastery of foreground detail, with its "specimen plants", is a snare to him.

Generally speaking, each bungalow of this and other areas is so carelessly placed, and its entrance avenue and garden are so little planned, that they give the least effect, instead of the most effect, which any competent designer would have given. I do not of course here as yet propose any designs for this Madura area, or for any of its rivals in in-success; but I do say that here, in the official quarters of Madura particularly, one of the finest town-planning opportunities of the whole of India has been and is being thrown away. For in this great Temple with its mighty towers twice or thrice as numerous as those of a European Cathedral, we have the historic and the spiritual pole of a city design. To this formerly existed the corresponding Governmental complement, the temporal pole, in the vast palace of Tirumal Naik. Here now was the analogous opportunity, that of laying out the new Governmental and residential city, upon the highest ground north of the temple city, and with its public buildings grouped and combined into a monumental whole, and its residences, ranging from these along orderly and spacious avenues.

This in fact is the method which rightly has been employed by Mr. Lutyens in the plan of new Delhi; but his distant perspectives of the public buildings and main avenues to the Jumma Musjid might here in Madura have been both surpassed and varied by utilising the different gopurams, nearer as these also are.

Yet here in Madura it is not altogether too late. Why should we not be able to see upon one plan the relation of new and proposed buildings of the first magnitude, like the Madura and the Rāmnād Courts? Is it because no such plan yet exists? Not only are City and Government each working at its own plans, without correlation with the other; but neither has ever yet unified its own plans upon a single design, so far as I can discover. It is not yet altogether too late, though ever more difficult day by day; for as the preparation of the plans of the two law-courts proceeds, the natural disinclination of independent architects and committees to modify or relate their projects, must increase also.

Before any such replanning as this can happen in Madura or other cities two definite movements of opinion are needed among the residents of each of these areas; and these happily are more or less beginning. First an artistic awakening, whereby the present poor and ineffective planning is being realised, so that, second, the question may arise:—How far may existing blunders, primarily those of the lay-out of whole areas, but even of particular bungalows and buildings, be capable of improvement?

XI

Town planning has also a further appeal, that to the governing classes everywhere, alike in India and at home. We are all learning to apply to the problems of the city—which are in our day beginning to be grasped anew—the same intelligence and goodwill, the same justice and sympathy, the same respect for the historic past and for surviving beauty, which it has been the pride and glory of the past in dealing with rural and agricultural communities. But with this we are coming to see that the tragic and increasing overcrowding of the old towns of Europe, and the bazaar towns of the east, for which we have hitherto so commonly and complacently blamed the people themselves, is also deeply of our own making, and this in many ways. Sometimes by our industries, sometimes by our railways; but very largely also through our vast suburban appropriation of the main sites suitable for popular expansion in the neighbourhood of most great overcrowded cities; and this from Madura to Manchester.

These facts are being at length understood; but they have next to be practically grasped; as they must be from the natural increase of population which is normal to growing cities and which often, as here in Madura, may proceed with leaps and bounds, as industrial progress develops, and the further urban growth of shop and market sets in. A new level of civic statesmanship must therefore be reached, in which each individual or group interest no longer acts for self-interest alone, but in subordination to the City's plan, which is more and more destined to become its veritable charter. Returning to cantonment areas in military cities, and to official, and educational ones here, the present method of extending the muddled and wasteful lay out of any particular quarter by new purchase, whenever a new public building is required—and this irrespective of the plan and the requirements of the growing city—will soon be looked back upon with feelings of disappointment and regret which I can only faintly anticipate here.

XII

Return now to our Madura plan in detail. Leave now this official and bungalow area, up to the race course, whose wasteful yet ineffective lay out, or rather want of lay out, has provoked this prolonged criticism, and its resultant appeal. Beyond this European quarter, we come to the large site of well on for 100 acres, which is being taken up on co-operative garden suburb lines, for about 60 large bungalows, each with its one or two acres, and with their associated tennis courts and semi-public garden. This plan has also been revised in the recent practical class and I hope may speedily be put into execution; and this alike for its own sake, as an excellent and much needed suburban initiative, and as an appreciable element of relief to the congestion of Madura city.

But while this suburb is within a mile or so of the new Official and Law Courts quarter, where most of its residents' professional duties and interests will be, its distance of over two miles from the temple makes much further expansion by the fixed inhabitants of the old city impossible in this direction. Where then can we look for the solution of these urgent difficulties :—(1) that of mitigating the present congestion ? (2) making provision for extensions enough to occupy at least the next few years ?

One large site alone remains, close to the old city, that of Madichiyam, between the river and the Public Park or, more accurately, between the low and easily flooded foreshore, with its long range of mantapams, and the series of windings of irrigation channels south of the present compound of the American College.

This whole area, of about 106 acres or thereby, it appears, was actually purchased by the municipality, and with views towards extension requirements. Yet it is plain that they, and indeed all others concerned, have become dulled by long familiarity and habit to the grievous case of this increasingly congested, and therefore increasingly unhealthy and deteriorating city. For only in this way could this, the one large and accessible site for town extension become alienated to other purposes, viz., those of the American Mission, of the new hospital, the proposed new school, etc. ; while, even upon the comparatively few acres which will remain if these proposals be carried out, it is desired to lodge the numerous clerks and others connected with the new Collector's office immediately northward. Under the circumstances I am compelled to suggest, indeed strongly to plead, that this whole policy be reconsidered ; and this, in a more generous spirit to the urgent needs of the city. I may even say in a responsible spirit—for I believe the result will be the same—a thorough change upon the present scheme ; I hope and plead, and press, a return to the original one, that of City Extension. For here, and practically here only, is the one large site remaining within easy distance of the city, a distance to which people can therefore easily walk home and return from their midday meal, even in the heat of the tropical day ; since to go further must involve, upon very many at least, an excessive strain. Let sites then be found for the Collector's clerks in a new garden village, north and west of Tallakulam village, and beside those which have to be provided for the clerks of the two Law Courts. Officials with better incomes and larger requirements, and whose work is upon this north side of the river, may without hardship extend the new suburb, which is being initiated by the Garden Bungalow scheme above north of the Bungalow poramboke. Let the new School be carried further back. Let the Hospital if possible also find a new site, *e.g.*, north of Koripalaiyam, or between that and Sellur. Finally, I plead with the American College that it also make a similar sacrifice, of its proposed fine situation on behalf of the urgent needs of the city for extension.

For the hospital a slight increase of distance cannot seriously matter ; nor for its Medical College, should this next arise. Patients travelling to and from the hospital will mostly have vehicles, and even those who come on foot to visit their sick friends do not come every day. Students of the College, and school boys as well, have largely bicycles ; and a little extra distance for them matters but little. In every way then I plead for the resumption of this large area to its original and immediate purpose. With a population of only 50 per acre, this site will hold over 5,000, enough to make a very substantial abatement of the present congestion.

If on this a large garden village be laid out, and especially if the proposed causeway (from the Kuruvikaran Salai across the river to Santhapet) be constructed, this improvement of the town would be a very complete one. Yet this would admit of further extension eastwards when required.

XIII

Yet even all this will not be enough ; so that I, who all my life have been making gardens, and pleading for parks, and have never before encroached on either, am compelled to go still further, and to suggest that, before many years it may also be necessary—if we are really to relieve congestion and adequately to diminish its resultant death-rate—to find some new substitute for the greater part of the People's

Park itself!—using this dry ground for building and thus housing several thousands more; and finding a new park in place of this, by the draining of one of the large and shallow tanks, say that to the eastward.

XIV

I realise the disappointment which such drastic proposals involve, notably upon the magnificent American College scheme, whose spacious campus I thus propose to build over! But I may suggest that by the prompt and careful planning of the Koripalayam sites to the northward of the present village, before the Law Courts and other schemes have cut up the ground irretrievably—it should be possible to lay out a noble avenue, leading to new college grounds, and these might expand fanwise, indefinitely northward, with space for the fullest extension, without further cramping of the town.

Its present buildings may surely be utilised in various ways, as for school purposes; and its bungalows may readily be disposed of, even to advantage. It is well worth while for the city to escape from its present and ever-increasing crisis of overcrowding and disease, to compensate all such displacements, and this in a liberal spirit of appreciation for the great public service which would thus be rendered.

Similarly for the hospital. Situated where it is now proposed, it may indeed require its many acres, but too much as a permanent, indeed increasing obstacle, to the health and the efficiency of life which it exists to promote! I am thus not without hope that its governing body may realise that the present appeal is but a special case of the modern endeavour of public health, to diminish the actual incidence of disease, so much connected with overcrowding, and this peculiarly in Madura.

I have carefully considered the possibilities of merely reducing the College, Hospital, and other demands for acreage, by one half or more, sketching out these acres in various ways. Yet after a good many weeks of delay, for fuller consideration, I unhesitatingly and emphatically repeat the proposition, that the whole of this site should be resumed, for the urgently needed extension of Old Madura. *Salus populi suprema lex!*

I am not a little encouraged by the open-minded and public-spirited way in which the President of the American College has applied himself to the consideration of a proposal so upsetting to his present plans as that indicated above: and I therefore submit it with increasing confidence to other bodies specially concerned, and their individuals responsible, as well as to the Municipality and to the Government.

I have not spoken of the dreadful vital statistics of the city—say mortal statistics rather: but I entreat each and every individual or group who may feel tempted to battle for his or their interest against that of the city's expansion to read, mark, and digest them. They are conveniently to be found in official sources.

XV

Within this general conception—that of the town-planning of the entire city, the detailed improvement of this or that point can be handled with a new boldness and simplicity of grasp, and with far less risks of error. Take for instance the site of the former Minkara block, still derelict: how is it now to be planned? The suggestion is said to be favoured by some at least in the municipality, of making it a public garden; and this is certainly a desirable improvement, for the city lacks open spaces. Others however, realising that the urgent and clamant need of the town is for relief of congestion—and that the only real way is by making houses not less numerous, but more so—desire the rebuilding of the area as closely as may be. Which plan are we to adopt, when each has so much of our sympathy?

Happily in the present case it is unusually easy to adopt a compromise between both plans: as the best course as well as the expedient one. This has been first sketched out upon the ground with the City Engineer; and our collaboration has been confirmed on the practical class at Madras, with the result indicated in the accompanying * block.

* Stitched after page 92.

It will be seen that a certain amount of garden and boulevard effect is introduced into each of the two streets which the square touches, and that in the perspective of these streets the undeniable narrowness of these open spaces will be increased in effect by the breadth of the street itself. The houses are slightly grouped, to be treated as a single frontage, so as to have a pleasing effect upon each street, yet consistent with their simplicity. The rubbish may be simply levelled and left as dry foundation for the new houses and their back-yards: their frontages upon the streets will moreover be more satisfactory by being raised upon the low terrace which this rubbish will yield. Of course for trees and for the garden, good soil must be brought in: but the rubbish dug out for this may only be thrown back, instead of carted away.

Finally, is it needful to reproduce other replannings, *e.g.*, of the new suburban site of Ponnagaram, with which these pages * began? Or of one or other of the villages to north of the river? Or of other examples of the conservative treatment of insanitary quarters? Or finally, of the alternative possible treatments of the Madichiyam site? (*a*) assuming its partial restriction by a reduction of acreage to be allotted to Hospital, to College, etc., and (*b*) assuming the entire removal of these further northwards and the allocation of the whole of this area to the expansion of Old Madura, rather than to the development of the new administrative and collegiate city—to the disastrous blocking of the health and progress of the Old City, as I seriously warn and contend.

After consideration, I do not think the reproduction of any of these necessary at present. Let them rather accumulate and mature. As these plans grow more numerous, as in the energetic hands of the engineer they will rapidly do, the preparation of the town-plan of Madura is thus proceeding. And without delaying any of the improvements discussed, why not be preparing for a small exhibition in the Town Hall of Madura, or other suitable public building, of all such plans, co-ordinated upon the plan of the expanding city? This demands the co-operation of all the responsible bodies and of their architects: but how better can these reach a common understanding and co-ordinate their various interests toward the city's weal?

XVI

The whole of these proposals have a grave defect, which needs clear pointing out here; since it is one which, as we have seen, municipal and other proposals are yet more prone to, and which they overlook accordingly.

Town-planning is not mere Place-planning, nor even Work-planning. To be successful, it must also be Folk-planning. That is, its task is not to coerce people into new places against their associations, wishes, and interests, as we, here and elsewhere, find bad schemes try to do. It is rather to find the right places for each sort of people: places where they will really flourish; to give them in short the same care with which we transplant flowers—instead of as too much at present, saying "move on", as an officious and arbitrary amateur police, and this too in the very harshest way in which police can ever appear, that of eviction.

To know more—much more—about the Madura people—that is a first task for the town-planner—though even I, who am brought here to be of good example on the subject, come to it last of all!

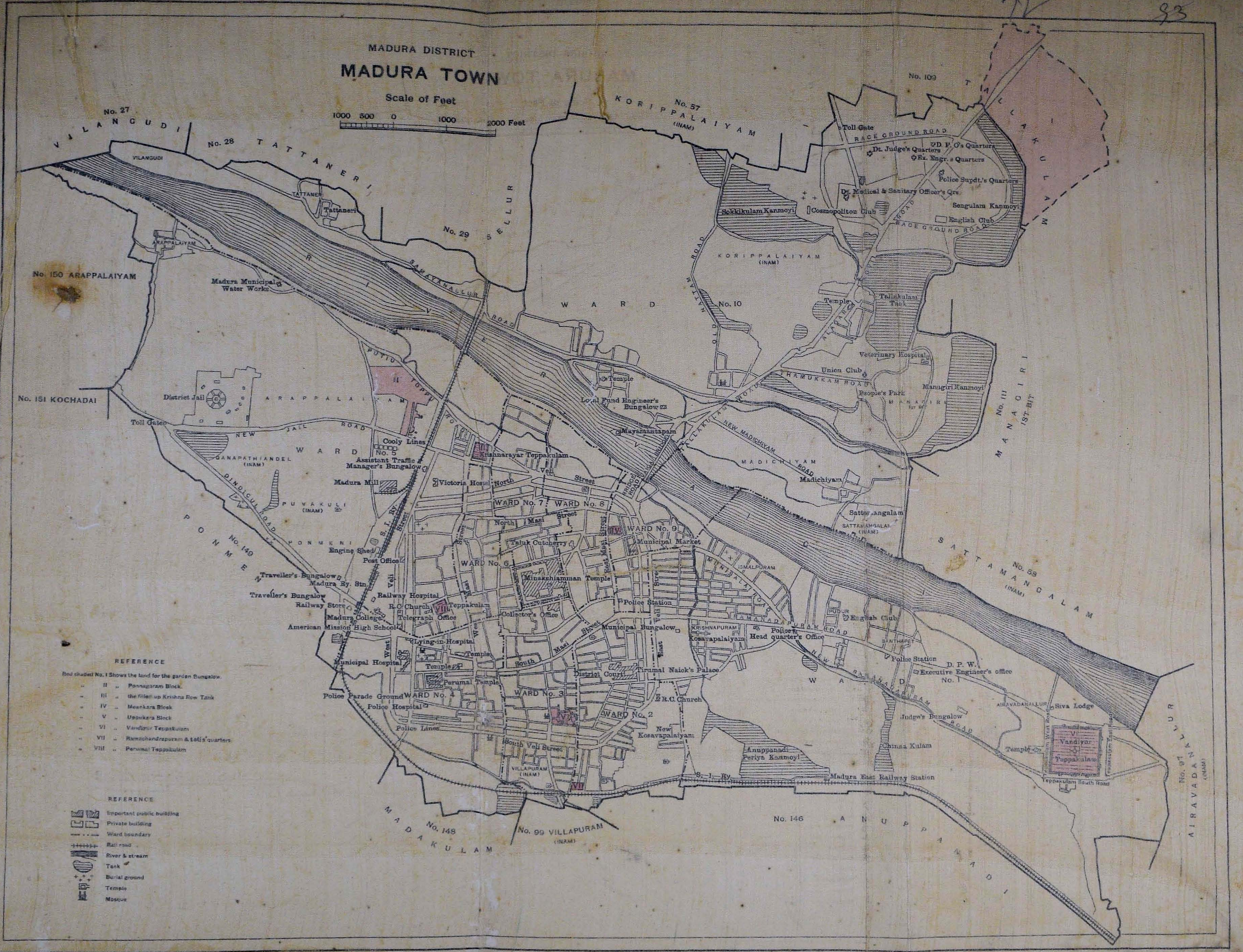
Take however as a simple instance the occupation of the silk-weavers, who form so old and prominent a group among the town's industries and industrialists—though Europeans (even like me, who am expected to avoid their mistakes, and try to)—always hear first of the (to us) more familiar cotton-mills, and only tardily of silk at all. But silk is not merely a different commodity, to be viewed on otherwise similar economic lines to cotton: it belongs to a different type of economics altogether, one far older than that of the cotton-mill, yet perhaps destined to take the lead of it before long. It would lead me far beyond these limits to justify this view of silk-industries and that of their high, even leading place, in the improvement of our industrial civilisation, and this at once on their scientific and their sanitary, their domestic and their artistic aspects. In each and all their respect the silk industries should peculiarly be aided and stimulated to advance, and this not only for their own

* Page 79 *supra*.

sake, but for the sake of the inestimable influence their cleanliness, skill, their refinement and beauty have had in the past, and still more may have in the future. To justify these large claims would involve reviewing the social history of China and Japan, of Southern France, and so on ; as well as a corresponding forecast of our own industrial age, as it emerges from its lower (paleo-technic) towards higher (neo-technic) forms ; but enough here if something of these hopes of silk, as in many ways a staple production of Madura in the future as well as in the past, be here admitted as worthy of consideration. If so, this will be found gradually but vitally to alter our views on many civic questions. Though cotton-weavers in factories may be treated, and with apparent impunity for a long time, without any more consideration than here, silk-weavers in their homes—and this whether in Lyons or in Madura--are thinking beings, at once critical and constructive. To apply their minds to their housing requirements, to their whole guild-interests, and to the city's interest, would in my serious judgment, produce in a year or two, a body of rational discussion which would be well worth the attention of municipality and of Government alike. Will they, or some of them, be willing to go into new suburban schemes ? — remembering that as they migrated here, so they may again ? I hope so. Will many wish to remain in their old city, and near their Temple and other associations ? I doubt not also. In any case, here is one of the world's aristocracies of labour, and one of the greatest factors to be reckoned with and provided for in the development of Madura.

XVII

Thus I might go on for each interest and social group ; from the Brahmins of the Temple to the untouchables, outside the city's precincts altogether. For each and every group and individual of us is yoked to his city's car ; and its future of good or evil journey, year by year, is the resultant of our many pulls. As we learn to co-ordinate these, City-designing will again have begun.



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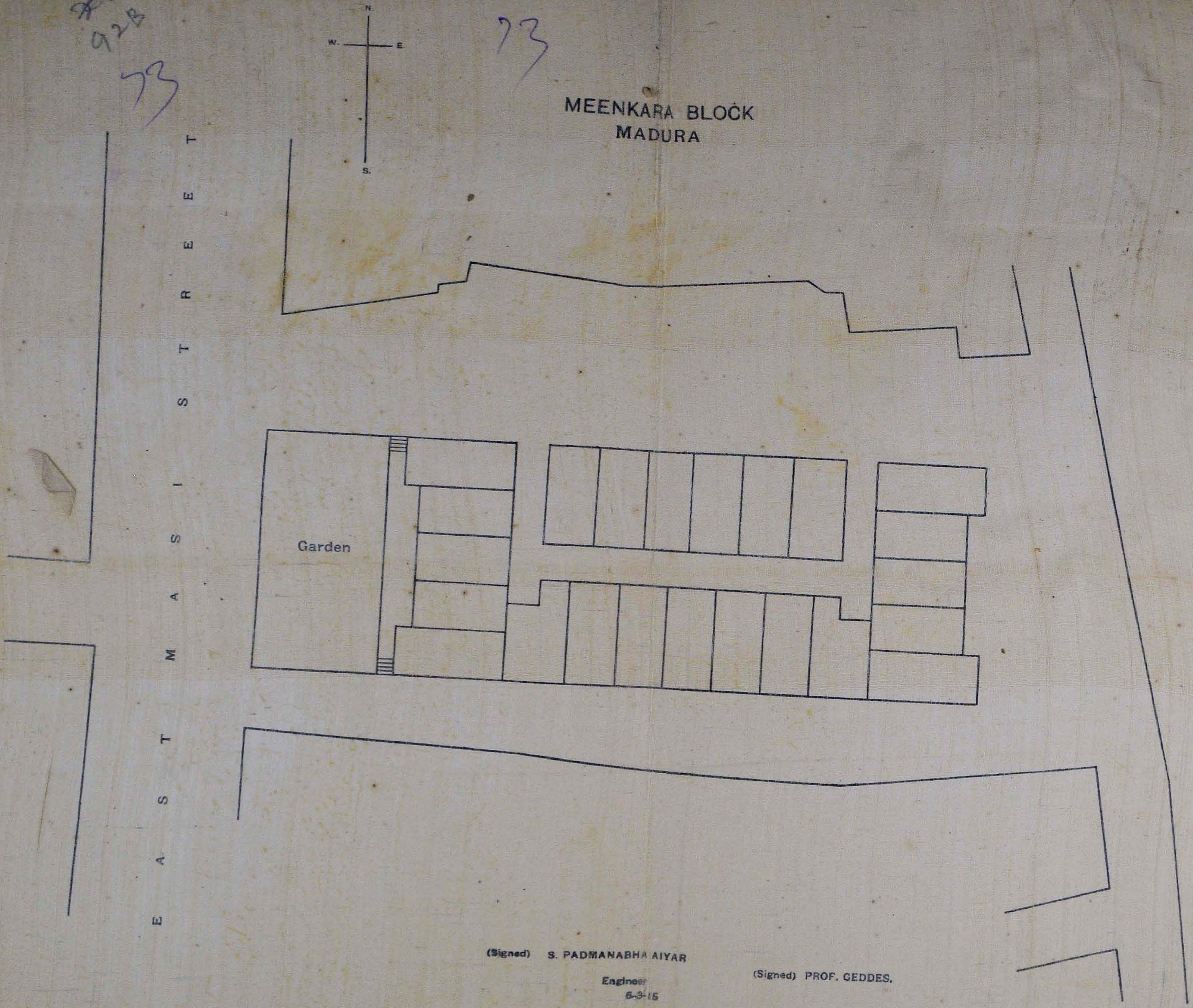
MEENKARA BLOCK
MADURA



(Signed) S. PADMANABHA AIYAR
Engineer
6-3-15

(Signed) PROF. GEDDES.

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UPPUKARA BLOCK

III Ward

MADURA TOWN

Scale of Feet

50 0 50 100 Feet

SKETCH No. I
As approved by the Sanitary Commissioner.

REFERENCE

- Pucca private houses to be acquired
- Kutcha private do.
- Municipal lanes
- Houses not to be acquired
- Boundary of the proposed roads

(Signed) S. PADMANABHA AIYAR
Engineer
11-5-15.

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(SIGNED) V. SRINIVASAN,
CHAIRMAN.

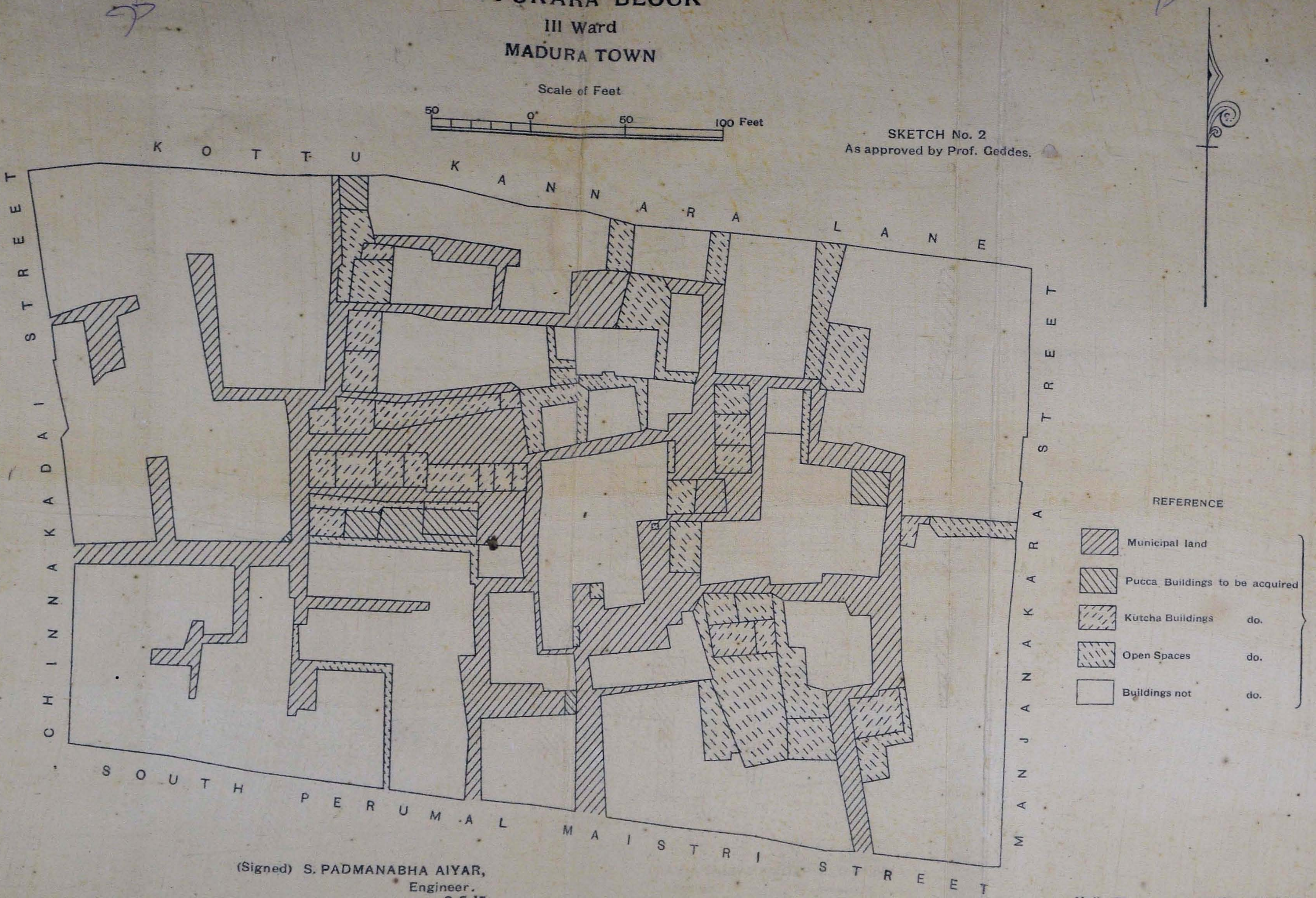
92d

UPPUKARA BLOCK

III Ward

MADURA TOWN

SKETCH No. 2
As approved by Prof. Geddes.



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Chairman.

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76

NELLORE.*

Though I have not visited this town, and cannot therefore speak as to its general condition, or its proposed improvements generally, its surveyor has been attending the practical class held in connection with the recent Cities and Town-Planning Exhibition; and one of the town's building-plans, with others showing the improvements which we have together been making upon it, may here be submitted. For this series of sketch-plans happens to afford one of the simplest, yet most obvious of the examples which have arisen in course of the work of this class, for bringing out the contrast between the conventional and prevalent "Bye-law Method" of Town-Planning, and the more spacious and pleasing, yet more efficient, and more economical, "Garden Village Method", which should now replace the former in India, as it is doing in England, indeed throughout Europe and America as well.

These plans, with their appended summaries, will speak for themselves: yet a few explanatory notes may be added.

I

In the First, or Bye-law, plan, the conspicuous feature is the immense length (with somewhat unnecessary width) of roads and lanes. Their total length, for this small building area, amounts to 4,635 feet = nearly four-fifths of a mile. The correspondingly extravagant acreage, thus devoted to dusty and treeless desert, amounts to nearly five acres—an area greatly in excess of that devoted to the houses which is only 3·16 acres. These five acres, it is true, include the patches of ground, left waste here and there, outside the roads altogether. The 51 houses provided on this plan are all exactly of the same size and type: 45 feet × 60 feet.

II

Now the second plan, as revised in and after the Practical class. Note here—

(1) The greatly simplified street system;

(2) Yet its directness, regularity and perspective effect; with the added advantage of a view, and passage, to the adjacent Agraharam street to northward. Note next

(3) the great economy of land through reduction of the previous length of roads. These now measure only 2,240 feet = less than two-fifths of a mile. This economy is obtained by placing the majority of the houses *outside* the street, instead of entirely *inside* a net work of streets as in the former case.

(4) the substantial increase in the number of houses which arises from the previous changes; fifty-nine instead of fifty-one.

(5) Only thirty houses, little more than half of the total now remain of the former size (45 × 60);

(6) All the rest have substantially larger plots, of varying size, obtained by giving them part of the ground which in the former plan was wasted on unnecessary streets, and on neglected ground. This extra space has been utilised for small gardens; and of these each is defended by the channel, and has a view across it to the opposite side or beyond. During the months when the channel is running those gardens should especially prosper. Note moreover

(7) the comparatively large amount of open public space now provided, with shade trees, so useful for play or rest;

(8) the improvement which these open spaces and trees effect in the situation of many (say 30) of the 59 houses; and upon their value accordingly; and

(9) the insertion of the necessary bridges (overlooked in first plan for lack of shading the water-channels).

* For plans please see after page 96 *infra*.

It will thus clearly be realised that the superior amenity of this plan, with its public spaces, etc., is yet consistent with (and more than paid for by) a twofold economy; first of streets, and secondly of ground, giving not only larger house-sites, but even more of them! For there are seven plots more in this second plan than in the first and these are the very largest, with the best gardens. The difference in cost is also substantial, mainly in saving of roads and lanes, but also of walling for plots: for even small details like the last sum up into substantial economies, which are at so many points realised by this style of planning over the older one.

Do not such considerations involve the abandonment of the first method, and the whole-hearted adoption of the second? The most strict utilitarian may surely soon recover from the shock given by the introduction of gardens and trees—which from the popular delusions bred and maintained by the futilitarian political economy (a "science falsely so-called" if ever there was one), have too often become associated within their mind with luxury to the rich, or at most with comfort-outlay to the well-to-do, instead of with health and well-being to all, and especial and peculiar advantage to the working community.

On this second plan, be it clearly observed, there are demonstrable advantages, directly estimable in money; and this on both sides of the account:—

(*a*) On one hand, a large capital economy is made, on outlays on streets, and on walling;

(*b*) on the other a yet more substantial increase of house return; and these in number, in space and in amenity alike; and consequently in rentals and market values. All these are substantial advantages for the proprietor in the first place; yet a source of better value for the tenant, and this continuously. Again

(9) With a pleasing plan, the neighbourhood has a character of its own from the outset, and this increases as trees grow, etc.; hence houses are far more readily and quickly taken up Tenants are attracted to a garden village, with its promising and pleasing homes; and the inhabitants become attached to it and do not wish to leave. Any vacant site or house is readily disposed of. Whereas who is tempted to plunge himself into the dulness of the first design? The worst slum has more variety of aspect. Hence finally,

(10) Property laid out upon this nineteenth century bye-law principle is now deteriorating in value, in face of the later Garden Village style. Even where accommodation is equal, the former is already a falling investment; and as the later style becomes more and more demanded by, and accessible to, the coming generation, it will become a fallen one, its value becoming merely that of the land, *minus*—

(*a*) the cost of removal of houses,

(*b*) the alteration of street system, and removal of unnecessary streets and lanes,

(*c*) the re-introduction of soil for gardens.

III

The third plan shows several slight improvements upon the second: but these have cumulative value.

(*a*) We here drop out three sites; of these two are in the central block, which is reduced from 10 to 8. The space is given to trees, with a corresponding improvement to a good many houses of the neighbourhood, whose further improved valuation should go far to compensate for this sacrifice of sites.

(*b*) I understand there is no immediate probability of the southmost street being prolonged in either direction: Hence for the present we—

(1) drop out a (third) house, that at the extreme South-East corner,

(2) give its space to the adjacent gardens,

(3) Tidy up the two blank, unsightly and unused extremities left in the second plan into orderly endings, each widened, and with a turning round a tree. We thus make a little saving of outlay for roads, as well as of garden ground.

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(4) The building line of all the houses of this altered street should remain straight, just as in the second plan; so admitting of the extension of this southmost street in either direction, if ever required, by merely reducing the adjacent end gardens to their size in second plan. Thus

(5) the utilisation of the adjacent property to the eastward (as shown in dotted lines) may be at any time, with obvious mutual advantages. Or similarly to westward; (Note the possible further narrowing here suggested).

(6) The middle plot of the southmost line of sites is left for the construction of a small temple if desired, or say for a village hall. Such a building would pleasingly close the perspective of the whole street; and thus renew what is one of the most excellent traditions and pleasing architectural effects of Indian cities.

(7) Inexpensive, yet appreciable, further improvements are obtained by planting a few more trees:—

(*a*) at each side of the culverts, thus giving picturesqueness to each little bridge.

(*b*) a row of palms at the foot of all gardens along the water-channel. These will hold up its bank. They also improve the return of each garden, and the aspects of the whole suburb, from every view-point, near and far.

It will be noticed that the width of streets, in both the latter plans, has been reduced from 45 to 40 feet. For the small traffic of this quiet and self-contained garden-suburb the breadth is amply sufficient; especially in view of the large open spaces, which (in the third plan especially) will be seen to give most of the streets of the northern portion a substantially greater width. Were this Hampstead, such streets would be made narrower, despite more vehicles than here. So wide is even 40 feet, where traffic is small, that, in the southern portion of the Main Street, a short line of trees is shown planted in the middle; since for these there is ample room in view of the absence of any through traffic. If that ever arises, they can easily be removed.

The general omission of sanitary lanes will be noted in Plans II & III alike. Yet as a variant, I have introduced a short lane at one point in the central block of the third plan, which may be omitted if desired. It will be noted that this lane is of a different type from the conventional thoroughfare lane, and of greater economy accordingly. A 45 feet frontage of houses affords space in every case for a side-latrine, with its sweeper's approach frankly upon the street, though of course apart from that of the house. If further arguments for that change be required, I may refer to some of my reports, *e.g.*, upon Cocanada * etc., in which I have argued out the advantage of this method, as the more truly sanitary, as well as the more economical of site and garden space and with greater privacy and safety; and with appreciable economies of construction, as notably in walling.

CONCLUSION.

The second plan shows the general change and contrast of the two methods: while advantages of further consideration and revisal appear in the third. This may be improved again? Why not? Thus more exact measurement of plots and frontages is desirable. A further narrowing of roads (and especially the southmost one) would also improve the design, say to 25 and 18 feet, respectively. The building line should not be correspondingly brought forward; but trees planted by occupiers in the substantial addition of frontage thus gained; so that a varied avenue effect would characterise the whole. This narrowing adds no less than three quarters of an acre to the gardens; an addition not to be despised and especially for trees. Thus extra time and trouble, spent upon more and more careful planning, is permanently repaid. Moreover, every such revisal makes its planner something of a better designer, more careful and more resourceful; yet more modestly conscious that his art is capable of indefinite improvement. Let no one therefore take even the best of these sketches for a "standard plan": but work up each new area he has to deal with, through repeated studies and sketches, towards further and further combination of economies,

* Page 1 *supra*.

efficiencies and amenities. Even with the most reduced outlay (indeed largely because of this) his scheme will then have a local character, a homely beauty of its own.

Here is the last word of town-planning, so far as I know anything of it. The preceding advantages, either separately and in combination, can only be realised in proportion as it is life-economies, life-efficiencies, life-amenities, that we are striving, and learning, to keep more and more clearly and constantly in view. For it is people we are planning for: not mere places. To plan places merely, and those from the monetary and the mechanical points of view, has been the essential error, and the permanent source of the material waste and ugliness, and the corresponding social deterioration, which have characterised the conventional "Bye-law Method" ever since its birth; and which are now bringing about its final disappearance.

The promotion of life; that is what must be constantly before us as our aim in planning. Not only life of trees and life of gardens, but life of workers, life of house-mothers; and, above all, the life, health and joy of the children who have so soon to replace them and us. And as this aim becomes clear, the miserable fear of mechanical planners—that "we cannot afford any of these fine things"—is dissipated. As these plans show, we find we can afford all these, and still have something over. We make not only mechanical and sanitary improvements, but monetary economies also; and these on every hand. Whereas the mechanical and monetary method—since thus blinded alike to thought and to skill, to nature and to art—involves its practitioners in unnecessary outlays, waste even to extravagance, outlays often exceeding those of historic magnificence. Yet it grudges all amenities—save vulgar ones indeed at times of mere display—and these for the rich only, and hence it has been without result in real amenities, even for them.

We see that this method of town-planning—that which views it as life-promoting—ends successfully, even from the standpoint of accountancy, *i.e.*, on the fullest financial balance-sheet. Whereas the former method, beginning as it does with Mammon, is everywhere and constantly fooled thereby. This in fact is why—on conventional lines—"Building is not a good investment"; yet also why garden villages are everywhere proving among the soundest investments. What business in the United Kingdom has grown faster and stands higher than "Co-operative Tenants Limited"? From an initial capital of £50 subscribed among the 15 working men who were its initiators, it is now well into its fourth million sterling of construction; and this within the half generation of the present century's youth.

For individual and family, street and village, for town and city, even for State and empire, what better can we invest in, than in Homes?

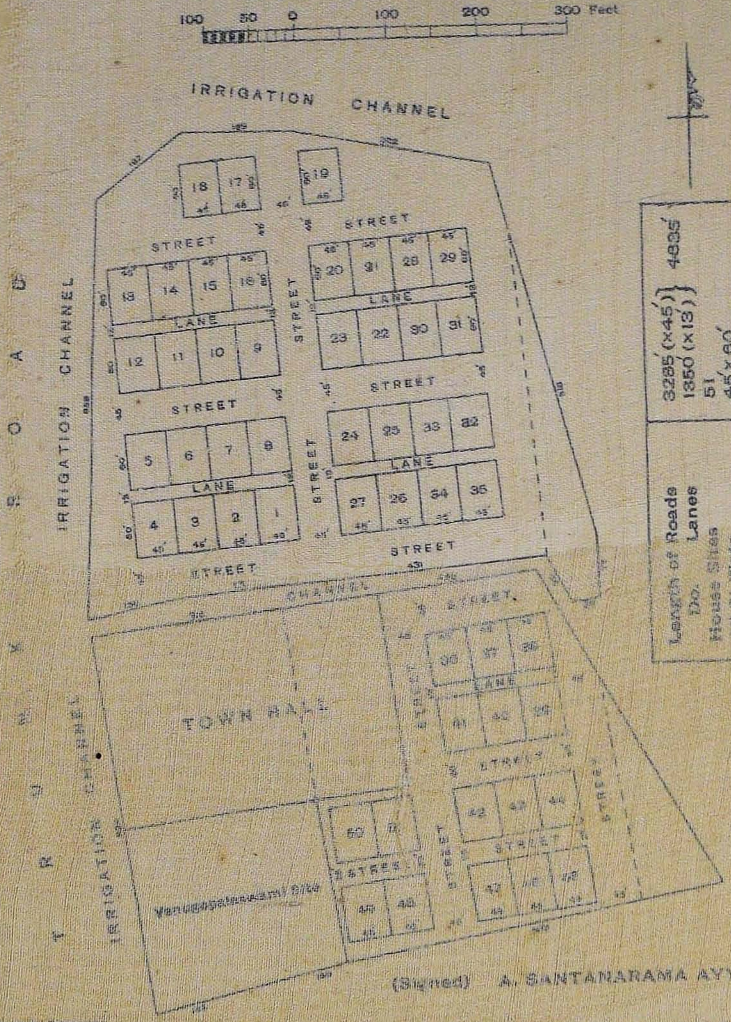
96A 28

NELLORE

MUNICIPAL COUNCILS LAY-OUT OF POGAKU THOTA

(Tobacco Garden)

Scale of Feet



Length of Roads	3285′ (×45′)	4635′
Do. Lanes	1350′ (×13′)	
House Sites	51	
All 51 Plots	45′ × 60′	
Houses and Gardens	3·16 Acres	
Public Gardens	Nil	
Roads and Lanes	3·79 Acres	

(Signed) A. SANTANARAMA AYYANGAR,
Chairman.

Special Overseer

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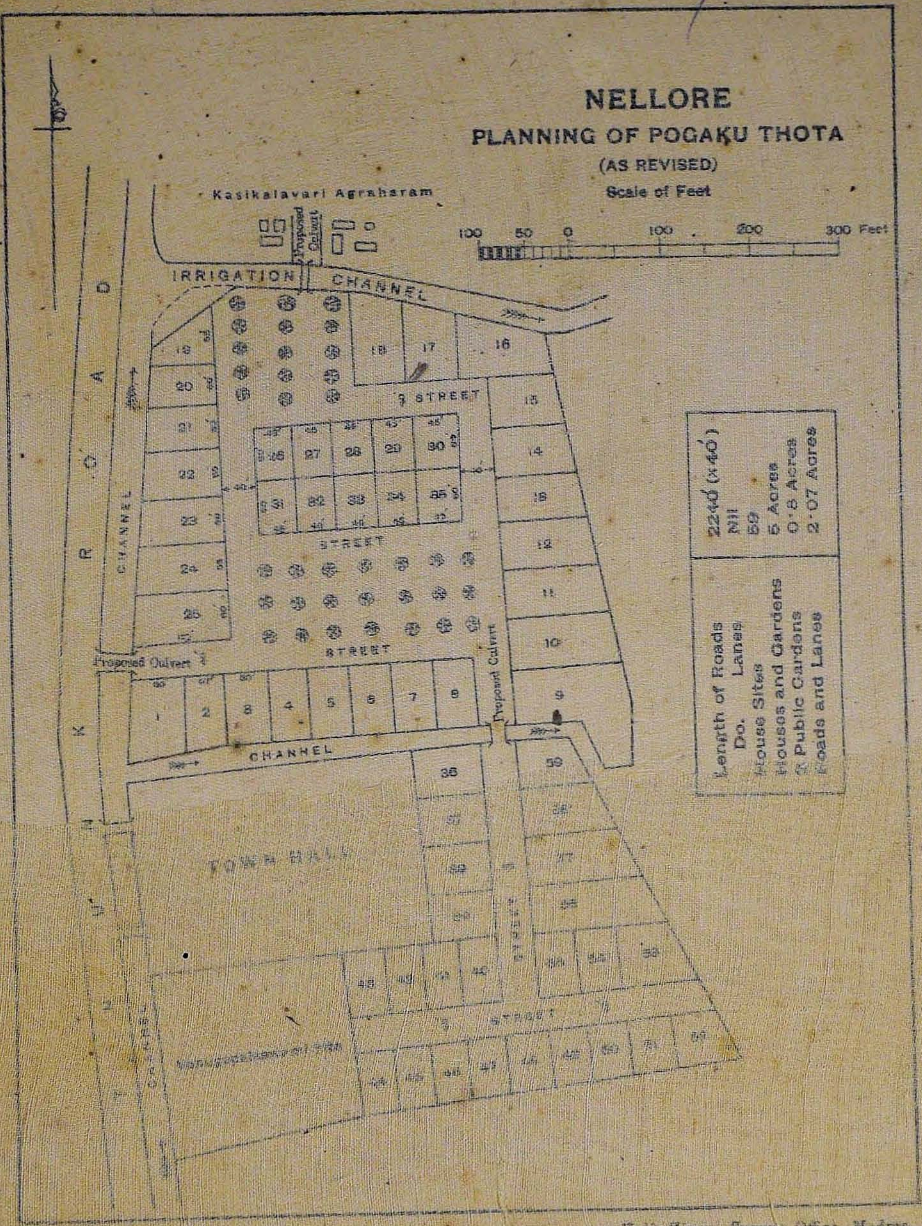

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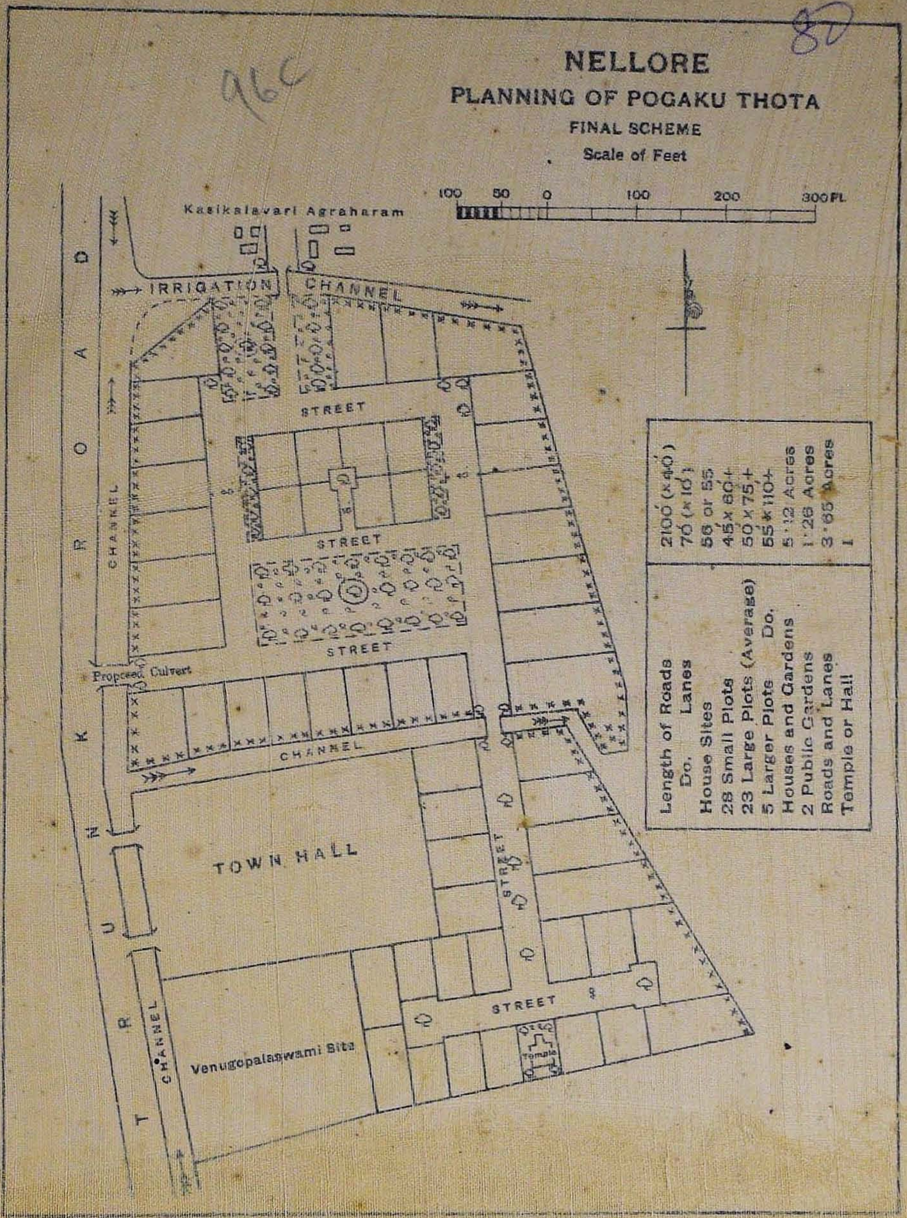

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TIRUVATTISWARANPET * (MADRAS).

Proposed street from Supariguntа Paracheri to West Car Street of Temple Square.

I

No feature of the planning of Indian towns is more characteristic than the square of car streets around a temple. It is an essential feature and character of this planning that this square is made, and kept unbroken, so that the entrances and exits are only at the corners, and not by the sides save indeed at times for the main approach. The same method is also employed by European town-planners, and this alike on grounds of convenience and of amenity. Only on grounds of real and urgent necessity of communications should such a square have a new street opened into any one of its sides.

In India it is of course doubly important not to do this. For the square is doubly injured, first in its ritual sanctity, and also as a Brahman residential area. Every Indian knows these things; and the responsible European also realises the undesirability of making such infraction of an enclosure sacred to his fellow-citizens generally. As practically also a member of a caste, no less decided as to the desirability of preserving its own residential quarter as unbroken as may be, he desires not to injure that of others. Peculiarly, he will admit, does this conservatism apply to the quarters inhabited by Brahmans or by Moslems, since these have each their ancient and spiritual sanctions, above and beyond their social exclusiveness.

Finally, the members of a municipality, or its officers, cannot forget that such breaking up of a caste street or area is not merely objectionable on the above grounds; but that it may involve a lowering of the desirability of a residential quarter, and of the demand for its houses. Thus the money value of the street, even the quarter, is lowered; and this capital depreciation to the properties of citizens, (with corresponding reduction of city income ultimately also) will usually outweigh any gain to communications which may be promised by breaking the square.

Though the customary phrases, of "*improvement*," "*increase of communications*," "*relief of congestion*" and the like are employed in such cases, these are too often little better than cant. They too frequently disguise that the ordinary engineering draughtsman, to whom town-planning is but a name, has gone to work upon a tracing of some section arbitrarily isolated from the town. With little knowledge of his town, and yet less understanding of it, but armed with drawing board and T square, he endeavours to rule his plan mechanically into a semblance of order, by extending the lines of its existing streets in various directions, in unthinking indifference to consequences such as are indicated above.

Floated into approval under the term "improvement," such a plan is then passed by the engineering and sanitary authorities and by the town council, of whom very few are accustomed to read plans carefully, it may practically be said as yet hardly ever critically—that is from the town-planning point of view.

II

Now an example of the mistakes above referred to is at present threatened in Tiruvattiswaranpet in the north of Triplicane. Here a street is marked to be cut through so as to open the Supariguntа Paracheri into the Western Car Street of the square, surrounding the Tiruvattiswaran Temple.

Reference to the municipal plan recently lent to the Town planning Exhibition, on which past changes are recorded and proposed ones are also shown, indicates that the conjunction of incompatible social and religious elements thus

* For plan please see end.

proposed, with its tendency to lower valuations accordingly, was not really designed: it appears to be the result of the usual type of draughtsmanship, neat and symmetric, but unthinking. Street-ruling is here, as too commonly, translated into town-ruling: as is inevitable where draughtsmen and their employers alike are for the most part still heedless of town-planning.

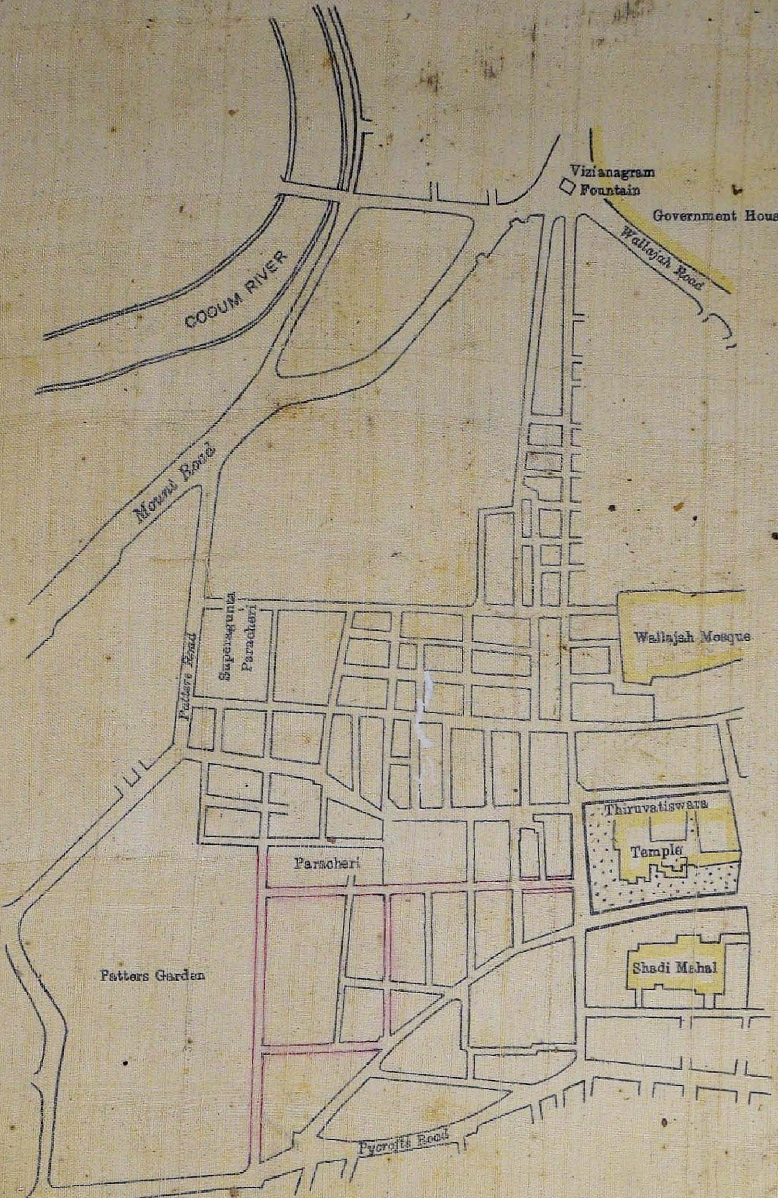
To clear up this matter a minute's study of plans will suffice:—

(1) Note first that the ordinary plans of Triplicane show (*a*) only one street running south from the Vizianagram Fountain, and *west* of this westerly Car Street of Temple. But (*b*) a new and direct street, parallel to this, and connecting the Vizianagram Fountain with this Westmost car street, has been executed some years ago, so rendering north and south communications easy, and with ample openings at intervals between these two parallel streets.

(2) Note now upon the proposed improvement plan the prolongation of the Suparigunta Paracheri Street, beyond its junction with the line of this older street, to cut into the square. Little inspection is needed to show that this prolongation is quite unnecessary, since the quite moderate needs of communications are already amply met without it, as by the widening near the north-west angle of the square. Viewing his work mainly as neat penmanship, the draughtsman is quite right in "opening" this square, but in no other point of view. This meek acceptance of neat draughtsmanship is in all cities a large element of explanation of the way in which promised "city improvements" so often turn out costly and disappointing when accomplished.

In the present case however the properties, though marked, and (I presume) even purchased, are not destroyed; and I therefore respectfully recommend their retention accordingly, and the preservation of the car square as it is.

If this be a disappointing result, after so much trouble has been taken, compensations are also clear. The immediate economy to the municipality of the two houses proposed for destruction is but the first of these.



TEMPLE & CAR STREETS:—

Portion of street extension from Paracheri considered undesirable.

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(True Extract.)

J. P. BEDFORD,
Acting Secretary to Government.

To all Chairmen of Municipal Councils.
" " Collectors (and Revenue Divisional officers).
" the Sanitary Commissioner.
" " " Engineer.
" " " Board.
" " President, Madras Corporation.
" " Town Planning officer.
" " Board of Revenue.
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